Gladstone Ports Corporation

Growth, prosperity, community.

GPC Document No.2005946: EC: TS
GPC Ref.: DA2025/04/01
Your Ref. Z21326.1

12 August 2025

RTA Yarwun Pty Ltd
c/- Zone Planning Group
PO Box 5332
GLADSTONE QLD 4680

Dear Sarah,

DECISION NOTICE – APPROVAL WITH CONDITIONS – DA2025/04/01

(GIVEN UNDER SECTION 63 *PLANNING ACT 2016* AND THE PROVISIONS OF GPC LAND USE PLAN 2012V2)

1. Application Details

This development application was **properly made** to the Gladstone Ports Corporation Limited on 23 May 2025.

Application Number:	DA2025/04/01
Applicant Name:	RTA Yarwun Pty Ltd
Applicant Contact Details:	c/- Zone Planning Group Att: Sarah Hunt PO Box 5332 GLADSTONE QLD 4680 Email: Sarah@ZonePlanning.com.au
Approvals Sought (Land Use Plan):	Port Application for Operational Works – undertaking work in, on, over, or under premises that materially affects premises or their use – Sump Pump Installation and Ancillary Works
Approval Sought (Port Overlay):	Not Applicable
Details of Proposed Development:	Port Application for Sump Pump Installation and Ancillary Works
Street Address:	Serrant Road, Yarwun
Real Property Description:	Lot 502 SP252988 and Lot 503 SP144788
Land Owner:	Gladstone Ports Corporation Limited
Land Use Plan Precinct:	Port Industry and Commerce
Port Overlay Precinct:	Port Industry Precinct

2. Details of Proposed Development

Port Application for sump pump Installation and ancillary works.

3. Details of Decision

This development application is **approved in full with conditions**. These conditions are set out in Attachment 1 and are clearly identified to indicate whether the Assessment manager or a concurrence agency imposed them.

4. Details of Approval

This development approval is a **Development Permit** given for:

(a) Port Application for undertaking work in, on, over, or under premises or their use – Sump Pump Installation and ancillary works.

5. Conditions

This development approval is subject to the conditions in Attachment 1 - Part 1 and Part 2.

6. Further Development Permits

Please be advised that the following development permits are required to be obtained before the development can be carried out:

(a) Not applicable

7. Approved Plans and Specifications

Copies of the following plans are approved and enclosed in Attachment 2:

Drawing/report title	Prepared by	Date	Reference No.	Version
Traffic Management Plan	Aestec Services	16/07/2025	AS-PL-012	1
Erosion & Sediment & Stormwater Control Plan	Aestec Services	06/08/2025 Amended	AS-PL-014	1
Acid Sulphate Soil Management Plan	Aestec Services	06/08/2025 Amended	AS-PL-011	1
Environmental Management Plan	Aestec Services	16/07/2025	AS-PL-009	1
Raw Caustic Receival and Storage Pump Station Security Fence Site Plan	Rio Tinto	24/06/2025	180C(2D)10106	E01
Raw Caustic Receival and Storage Concrete Bund Area Upgrade General Arrangement	Rio Tinto	22/01/2025	180D(2D)10108	C01

Drawing/report title	Prepared by	Date	Reference No.	Version
Raw Caustic Receival and Storage Concrete Bund Area Upgrade Sump Layout and Sections	Rio Tinto	22/01/2025	180D(2D)10109	C01
Raw Caustic Receival and Storage Concrete Bund Area Sump 2 Details	Rio Tinto	22/01/2025	180D(2D)10110	C01
Raw Caustic Receival and Storage Concrete Bund Area Typical Joint Details	Rio Tinto	22/01/2025	180D(2D)10111	C01
Raw Caustic Receival and Storage Concrete Bund Area Steelwork Details	Rio Tinto	22/01/2025	180S(S)10116	C01
Raw Caustic Receival and Storage Secondary Sump Pump 180PUI10955 Schematic Diagram	Rio Tinto	24/02/2025	P01-180E(2D)10116	C01
Raw Caustic Receival and Storage Secondary Sump Pump 180PUI10955 Interconnection Diagram	Rio Tinto	24/02/2025	P01-180E(2D)10116	C01
Caustic Handling 180L10955 Sec. Sump Pump Level Instrument Loop Diagram	Rio Tinto	04/03/2025	P01-180L10955_LS	C01
Raw Caustic Storage 415V Distribution MCC 180MC10110 Single Line Diagram	Rio Tinto	24/02/2025	P03-180E(2D)10013	C01
Raw Caustic Receival and Storage 415 Distribution MCC 180MC10110 General Arrangement Sheet 1	Rio Tinto	24/02/2025	P03-180E(2D)10032	C01
Raw Caustic Receival and Storage 415 Distribution MCC 180MC10110 General Arrangement Sheet 2	Rio Tinto	24/02/2025	P03-180E(2D)10033	C01
Raw Caustic Control 24DC Control Power MCC 180M10110 Circuit Schedule	Rio Tinto	24/02/2025	P04-180ESD0004	C01
Raw Caustic Received and Storage GEO Tank 1 Cable Block Diagram	Rio Tinto	24/02/2025	P05-180E(2D)10012	C01
Raw Caustic Receival and Storage Raw Caustic Storage Area Instrument Location Plan	Rio Tinto	04/03/2025	P05-180I(2D)10001	C01
Caustic Handling Pipeline – 180CA10019E2 Piping Isometric	Rio Tinto	03/02/2025	180CA10019-A	C01
Caustic Handling Pipeline – 180CA100192E2 Piping Isometric	Rio Tinto	03/02/2025	180CA10019-B	C01
Caustic Handling Pipeline – 180CA100192E2 Piping Isometric	Rio Tinto	03/02/2025	180CA10019-C	C01
Caustic Handling Pipeline – 180CA100192E2 Piping Isometric	Rio Tinto	03/02/2025	180CA10019-D	C01
Caustic Handling New Caustic Sump Pump and Piping New Pump Plinth Details	Rio Tinto	03/02/2025	180D(2D)10112	C01

Drawing/report title	Prepared by	Date	Reference No.	Version
Caustic Handling New Caustic Sump Pump and Piping General Arrangement	Rio Tinto	03/02/2025	180P(2D)10069	C01
Caustic Handling New Caustic Sump Pump and Piping Spool Details	Rio Tinto	03/02/2025	180P(2D)10070	C01
Caustic Handling New Caustic Sump Pump and Piping Scale Trap 180PS10955 & Support Details	Rio Tinto	03/02/2025	180P(2D)10071	C01
Raw Caustic Storage Sheet 1 of 1 Progress Flow Diagram	Rio Tinto	03/02/2025	P02-180Z(2D)20021	C01
Raw Caustic Storage Bladder 1 Caustic Suction & Leak Detection System Piping and Instrument Diagram	Rio Tinto	03/02/2025	P03-180Z(2D)10106	C01
Raw Caustic Storage Receival Storage Piping and Instrument Diagram	Rio Tinto	03/02/2025	P06-180Z(2D)10102	C01

8. Currency Period for the Approval

Pursuant to section 85 of the Planning Act, this development approval will lapse at the end of the periods set out below:

(a) For Port Application this approval lapses 6 years after this approval decision date.

9. Rights of Appeal

No legislated appeal rights are afforded with this decision notice as the application was not made under the provisions of the *Planning Act 2016*.

For further information please contact Trudi Smith, Planning Specialist, on 07 4976 1314 or via email planning@gpcl.com.au .

Yours sincerely,

Jenelle Druce
Acting Chief Executive Officer

Enc. Attachment 1: Conditions of Approval
Part 1 – Conditions imposed by the assessment manager

Attachment 2: Approved plans and specifications

Attachment 3: Waiver Appeal Rights

Attachment 1 Conditions of Approval

PART 1: ASSESSMENT MANAGER CONDITIONS

In general the development proposal is in compliance with the requirements of Gladstone Ports Corporation Limited (GPC). This development approval is subject to each the following conditions which are stated by GPC, the Assessment Manager.

Part 1a: Approval sought under Land Use Plan – Port Application

CONDITIONS
GENERAL
1. Development must be carried out generally in accordance with the Approved plans and supporting management plans, except where modified by conditions of this permit.
2. Unless otherwise stated, all conditions must be complied with and completed prior to the commencement of the development.
3. Where additional "approval" is required under these conditions by the Assessment Manager (GPC) for drawings or documentation the proponent must submit for review, amend to the satisfaction of, and obtain written approval from the Assessment Manager. Furthermore, the Assessment Manager will require no less than 20 business days, unless otherwise conditioned by the Assessment Manager, to initially assess the drawings or documentation provided prior to the commencement of the works. Should further information be required for assessment, the Assessment Manager will require a further 5 business days to complete the information request assessment and response.
4. The Applicant must at its cost and expense, keep and maintain the development footprint, including existing services, in a state that is satisfactory to the Assessment Manager.
ENGINEERING AND PLANNING
5. Upon completion of the works, the Applicant must supply the Assessment Manager with RPEQ certified "As Constructed" plans in both PDF and electronic (CAD format) which illustrate all infrastructure and services installed on, under or over Port land associated with the activity.
6. Upon completion of works, the Applicant must certify that the development is constructed as per design and that the development has been constructed generally in accordance with the Approved plans.
7. Any site lighting used during construction channels must illuminate a landward glare beyond the site boundary. Lighting must be reviewed during construction and use of the development with respect to navigation. Where an issue is identified or a validated complaint received, the Applicant must immediately rectify to the satisfaction of the Assessment Manager
8. Prior to completion of works, the Applicant must reinstate the security fencing in accordance with the Raw Caustic Receival and Storage Pump Station Security Fence Site Plan with transparent fencing. The security fencing must be provided to a minimum of 1.8m in height. Unless otherwise approved by the Assessment Manager, the fencing is to be black PVC plastic coated, chain wire mesh fence and black posts.
9. The Applicant must maintain the property frontage in a clean and tidy manner, mow any grassed areas and maintain any stormwater drains within the lease area regularly.

INFRASTRUCTURE
10. The applicant must notify the Assessment Manager (GPC) of damage caused to any port infrastructure or services e.g. roads, water mains etc. as a result of the works. The applicant may undertake the repairs directly in consultation with the Assessment Manager however, depending upon the nature and location of the damage, the Assessment Manager retains the right to undertake the repairs at the expense of the Applicant.
WASTE MANAGEMENT
11. At all times, maintain and operate an adequate waste disposal service, including the maintenance of refuse bins and associated storage areas so as not to cause an environmental nuisance.
12. Any spillage of sediment, wastes, fuels, chemicals, contaminants, or other materials at the storage site, on port roads or on the wharf must be cleaned immediately. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such materials to any stormwater drainage system, roadside gutters or waters.
CONSTRUCTION MANAGEMENT
13. The Applicant is required to apply for and obtain from GPC a Permit to Dig/Excavate prior to commencing works by contacting, GPC's Port Infrastructure Asset Manager, including for any landscaping, services or infrastructure outside of the lease area.
14. In the event a construction compound is required on port land outside the project lease area for offices, laydown areas, employee car parking or stockpiling areas etc., the Applicant or their contractor must obtain a Consent to Enter from the Assessment Manager's Property Specialist via 07 4976 1334 or property@gpcl.com.au prior to works commencing.
15. The construction compound, including offices, laydown areas and employee car parking, is to be contained within the nominated area unless otherwise approved in writing by the Assessment Manager.
16. No mud, dirt or other debris is to be tracked onto public roads during construction and operation of development.
17. Any construction fill material must be uncontaminated and reused from onsite or sourced from a licensed quarry.
ENVIRONMENT
Operational Environmental Management Plan 18. At least 10 days prior to the commencement of the use, an Environmental Management Plan (EMP) is to be submitted to the Assessment Manager (GPC) for approval, specific to the development that ensures: a. environmental risks are identified, managed and continually assessed; and b. that staff are trained, aware and competency assessed of their obligations under the EMP, including a copy of the management plan and development approval available on site at all times; and c. that reviews of environmental performance are undertaken at least annually; and d. any amendments to the EMP are to be submitted to the Assessment Manager for review and approval; and

e. any rehabilitation and decommissioning works where required. Once approved by the Assessment Manager, the approved development must be carried out in accordance with this EMP. *Note: the Assessment Manager has a guideline for the development of environmental management plans that may be utilised in meeting the requirements of this condition.*
19. Any amendments to the Environmental Management Plan (EMP) are to be submitted to GPC for review and approval. Amendments must ensure: a. environmental risks are identified, managed and continually assessed; and b. that staff are trained and aware of their obligations under the EMP; and c. that reviews of environmental performance are undertaken at least annually.
20. The premises is located on part of a lot that is registered on the Queensland Environmental Management Register. Therefore, disposal of any excavated material off site must be in accordance with relevant legislation or alternately retained on site.
INCIDENT NOTIFICATION
21. At all times, Gladstone Ports Corporation Environment Hotline (07) 4976 1617 is to be notified of the occurrence of any: a. release / spill of contaminants (e.g. fuels / chemicals / sewerage) greater than 20L to land; b. release / spill of contaminants (e.g. fuels / chemicals / sewerage) of any amount to water; c. any environmental complaints received by the holder of this approval; and d. non-compliance with environment related conditions of this approval, or any other environmental approval obtained in relation to the approved activity.
22. Environmental incident notification must be included in any Environmental Management Plans for the premises.

ADVICE NOTES

a. In relation to works proposed on tidal structures (not forming part of this development approval), the Applicant is required to comply with the requirements for excluded tidal works in the Excluded Works (Coastal) Guideline.

b. The subject site has the potential for inundation from medium and high storm tide events. Any future development and/or upgrades of this site should give consideration to managing these potential impacts as part of any application material.

c. Where a Permit to Dig/Excavate prior to commencing excavation or digging for the development, the Applicant or their contractor is required to apply for and obtain the permit by contacting the Port Infrastructure Asset Manager on 4976 1332 or bartono@gpcl.com.au.

d. Where a construction compound or laydown area is required, the proponent or their contractor is required to apply for and obtain a Consent to Enter from the Assessment Manager's Property Specialist via 07 4976 1334 or property@gpcl.com.au prior to works commencing.

e. The *Environmental Protection Act* 1994 states that a person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm. Environmental harm includes environmental nuisance. In this regard persons and entities, involved in the civil, earthworks, construction, and operational phases of this development, are to adhere to their 'general environmental duty' to minimise the risk of causing environmental harm.

f. All development should proceed in accordance with the duty of care guidelines under the *Aboriginal Cultural Heritage Act 2003*. Penalties may apply where duty of care under that Act has been breached.

g. Where the Applicant is required to submit further documentation to the Assessment Manager, this is to be directed to the Planning section at planning@gpcl.com.au, including reference to the allocated development application number and condition.

h. Where communication with GPC Port Security is required e.g. for schedules or service requests, direct communication to the following: pfso@gpcl.com.au, contracted_security@gpcl.com.au and gpcsupervisor@diamondprotection.com.

Attachment 2 Approved Plans and Specifications

AESTEC SERVICES

BUILDING * PLUMBING * CIVIL

AS-PL-012

TRAFFIC MANAGEMENT PLAN

Version: 1.0

PY368H – Caustic Transfer Station Sump Pump

RTY Yarwun

INTRODUCTION

1. General Overview

Aestec Services is committed to safety as a way of doing business and its performance in safety is used as a performance indicator in measuring its success as a business.

Construction Management Works shall comply with the requirements of Rio Tinto Yarwun Traffic Management Plan and Procedures as provided by the Principal.

The intention of this document is to identify and mitigates risks associated with the following topics:

- Site establishment;
- Construction team;
- Mobilisation;
- Construction methodology;
- Disruption to neighbouring properties;
- Public safety, amenity, and site security;
- Project Employee parking;
- Noise Management;
- Waste Management;
- Air and Dust Management and;
- Traffic Management.

2. Scope

This document describes the Traffic Management Plan (TMP) to be used to risks associated with vehicle movement are identified, managed and controlled. Work undertaken by Aestec will follow a consistent workflow/processes as described within this document. Deviations from these processes can only occur:

- Under specific instructions/direction of our client(s); and
- With written authorisation from RTY Yarwun representative Project Scope.

3. Definitions

Term / Acronym	Definition
FSP	Fundamentally Stable Parking When a vehicle is parked, it cannot move in an unplanned or uncontrolled fashion, even if the vehicle is out of gear and the park brake should fail to engage. A vehicle is considered fundamentally stable when: • The vehicle is in neutral, or the clutch pedal is depressed and • The handbrake is disengaged and • The vehicle does not roll If the vehicle rolls, two-wheel chocks are required to provide FSP.
HME	Heavy Machinery Equipment which includes, but is not limited to: Bulldozers, graders, loaders, backhoes, scrapers, compactors, tractors, excavators, ADT (Articulated Dump Trucks)
LV	Light vehicles. Any vehicle that weighs less than 4.5 tonnes.

MV	Medium Vehicles which include: Rigid water carts, service trucks, medium and heavy rigid trucks, franna cranes, Excavator <20T capacity
Positive communication	Positive communication is the acknowledgement and confirmation that the communication has been received and understood by both parties. Example: "LV25 wish to enter bund Circuit from the pond" response "This is HV14, LV25 proceed with caution"

4. Scope of Work

This scope details the Works included to safely supply, fabricate, assemble, install and test the new caustic transfer station sump pump with all associated piping and steelwork inclusive of all quality assurance tasks.

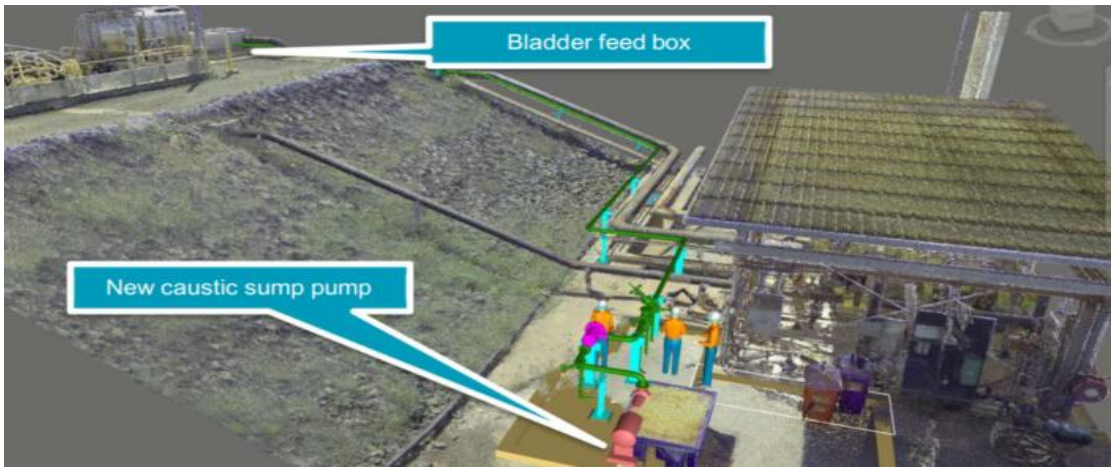
Refer to 180GSW8004 Rio Tinto Yarwun Projects Caustic Transfer Station Sump Pump.

4.1. Site Location

The scope of works will be carried out at the caustic sump located at Area 180 as depicted below.

4.2. Battery Limits

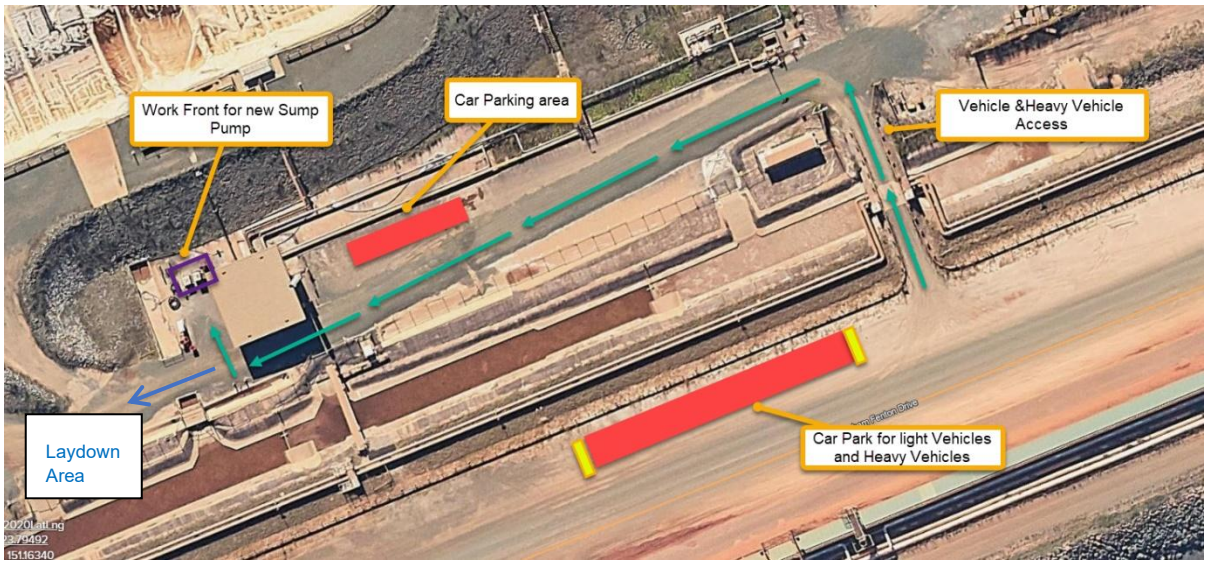
The battery limits and for the Works are detailed on P&IDs P03-180Z(2D)10106 and P06-180Z(2D)10102. There is only 1 tie-in point for this project which is TI-180-026 on the bladder feed box.



5. Rio Tinto Yarwun Traffic Management Plan

Aestec will comply with the requirements outlined within 180CGR8002 Caustic Transfer Station Upgrade Traffic Management Plan.

Fisherman's Landing Road is the primary access route for vehicles entering the RIO TINTO wharf facility. Other land users also use the roadway to service and manage their facilities, some other business access also must be taken into when servicing the ships alongside the wharf i.e. taxi and delivery drivers. Signage will be placed prior to any impact on the vehicle access in and out of the Riotinto caustic storage Yard.



The following requirements are to be complied with for the Project, and in contractors' Traffic Management Plans:

- Driving shall occur on the left-hand side of the road;
- Queensland road rules shall apply unless specifically stated otherwise herein;
- All vehicles shall follow all instructions given by a traffic controller or spotter;
- All vehicles shall maintain a 50m clearance from heavy vehicles;
- All vehicles shall maintain a safe distance from all other vehicles. A safe distance shall be determined by the prevailing environmental, road, traffic and operating conditions.

6. Driver Authorisation

All operators of mobile plant, including light vehicles, shall as a minimum:

- Hold a Full Open License within any Australian state or territory (applicable to the class of vehicle being operated)
- Hold a high-risk work license (HRWL) where applicable or Certificate of Competency for the mobile plant they are operating issued by a Registered Training Organisation (RTO)
- Completed and passed a Verification of Competency (VOC) within the last 2 years (model-specific for mobile plant); and
- Be authorised to operate/drive.

7. Registration of Project Vehicles

All vehicles parking in the material handling project carpark will be required to provide registration details to the project team. This information will be shared with Yarwun Site Security and relevant GPC authorities on request to ensure security of the area can be monitored and maintained.

8. Parking

Parking at the project site will be in accordance with Yarwun policy. A designated parking area will be established for the project with the capacity for 10 vehicles. Overflow parking is designated outside the fisherman's landing security gate.

The carpark will be reverse parking. All light vehicles are to be reverse parked in the designated parking area in an orderly and fundamentally stable manner.

Water barriers will be used to designate the confines of the carpark. These barriers will also be used as traffic management aids, to direct vehicles to a safe access path if required.

9. Heavy Vehicle Parking

Heavy equipment including trucks must be reversed parked in the designed go line area in an orderly and fundamentally stable manner.

10. Entering Fishermans Landing Security Zone

All persons working on the project must swipe on at the GPS fisherman's landing security gate. A current GPC fisherman's landing induction will be required, and the swipe card will be issued at Yarwun site control and will need to be returned when leaving the project.

All traffic must follow the signposted speed limits and traffic signs when entering and leaving the project site. Heavy equipment including trucks must be reversed parked in the designed go line area in an orderly and fundamentally stable manner.

11. Pedestrian Access

Pedestrian access will be provided along the back of the carpark, Access over the main bridge to allow safe access over the main bridge personal will need to communicate with any vehicles or traffic controller to allow access over the bridge. Full RIO TINTO site compliant PPE will be required to be worm when exiting vehicle or when inside a vehicle with the windows down.

12. Site Induction

The traffic management plan will be communicated to all project workers during kick off of the Project.

13. Personnel Entry to Site

All personnel are required to comply with the RioTinto Yarwun site PPE requirements when entering the site and these requirements will commence as soon as the person exists a vehicle. When entering site persons engaged in the works will be required to sign on to the appropriate Project paperwork at the start of the shift and sign off again at the end of the shift or leaving the site during shift hours. Visitors to site will must be escorted at all times when inside the project boundaries or have completed the site induction/formalisation process.

13.1. Exclusion and Segregation

Pedestrian exclusion zones shall be identified, signposted, and communicated to personnel. Pedestrian crossings shall comply with the following requirements:

- Be used in areas with high levels of pedestrian traffic;
- Be signed posted to clearly identify where pedestrians must cross roadways;
- Have signage on roadways prior to the crossing, to alert approaching drivers and operators;
- Be sign posted with 'give way" on the left-hand side of the road where the crossing begins to alert the drivers and operators;
- Pedestrians must use footpaths and designated road crossing locations;
- Pedestrians shall give way to all vehicles at any designated pedestrian crossing.
- Have separate traffic routes for pedestrians and vehicles so that vehicles cannot physically enter pedestrian space;
- Be provided with appropriate protection from vehicular traffic where possible with entry barriers to pathways, including signage, bollards, and deflection handrails, may be erected to discourage vehicles from accessing those pathways; and

- Falling object protection devices, barriers and signage shall be installed where pedestrians are required to pass under any infrastructure from which an object could fall.

13.2. Exclusion and Segregation

Elimination is the preferred control where SME and personnel interface. Where this is not achievable, the risk control strategies shall consider, but not be limited to:

- The time of day such work will be performed;
- The use of physical barriers, lights, and signage;
- Radio communications;
- Training in the hazards of working near mobile equipment and supervision of personnel;
- Site notices and other communications; and
- Traffic Controllers and Spotters.

13.3. Barricading and Separation

Where the potential exists for interface between SME, road bearing equipment and personnel, access to work areas must be controlled through the use of:

- Barricading;
- Signage in accordance with the requirements of this Plan; and
- Communications in accordance with requirements of this Plan.

This shall be achieved by:

- Signage erected at entrance points demarcating area ownership and relevant information for the provision of a safe working environment including:
- Emergency management processes and contacts
- Primary contact details of the person in control of the work area
- Work area specific Major Hazards and Critical Control management
- Work area specific communication channels and methodology
- Work area specific risk management;
- Ensuring all perimeter access points are clearly sign posted as restricted areas and controlled to prevent inadvertent access of unauthorised persons; and

Erection of direction signs along the access road and entry points to ensure the location of major infrastructure is easily identifiable.

14. Truck Movements

Prior to any heavy equipment entering the security zone the occupants must be both Rio Tinto inducted and hold the appropriate GPC fisherman's landing access card and Rio Tinto area inductions.

Trucks are to be parked overnight in the designated carparks and all prestart checks are to be completed on the line before commencing work. Rio Tinto Yarwun compliant PPE is to be warm while conducting prestart checks and while operating equipment.

Truck access to the site will be via the front gate and if required access gate on the Northern boundary of the caustic yard. Due to the restricted nature of the area inside the caustic yard it is envisaged that the trucks will need to travel in one direction pending on the size of the Truck.

15. Mobile Equipment

Any additional mobile equipment that will be required during the project may be retained inside the caustic yard boundary if removing it from the area causes additional hazards and if there is sufficient room available to store the equipment in a safe manner.

16. Materials Transported to Site

All truck loads being transported to the RMA or other areas on site must be accompanied by a spotter. The spotter must be utilised when the truck is in a restricted to tight location and when the truck is being reversed. The spotter and driver must be sufficiently inducted and familiar with the specific area of the site prior to commencing the delivery.

17. Towing

No vehicle will tow equipment unless it is engineered to do so. Towing equipment must be tagged and identified so that it is not used for lifting. All towing equipment will be stored correctly in the Aestec Storage container and will be clearly tagged identifying so that it is not used for lifting purposes.

When towing trailers, personnel must be assessed as competent and be authorised to undertake towing operations.

When towing trailers, personnel must:

- A personal risk assessment completed prior to commencement;
- All trailers and trailer hitch must be compliant with the Australian Design Rules;
- Towing vehicles must be of sufficient size to control the tow and comply with the rated Aggregated Trailer Mass;
- The towing hitch must be inspected prior to attaching;
- Safety chains must be installed and properly utilised;
- Where pintle hitches are used that do not incorporate a self-locking mechanism, the pintle hitch safety pin must be properly utilised;
- Low range 4WD should be engaged when towing equipment in wet or slippery conditions;
- Trailers shall be safely immobilised prior to disconnection from the towing vehicle, achieved using stabilising jacks (if fitted), parking brakes or wheel chocks;
- Consideration to hazards related to shifting loads during travel.

In the event of a bogging, contact the Company Rep or Project Supervisor, raise an incident, and develop a rescue plan detailing what we intent on using for the recovery and what controls are in place in the event of a strap failing during the recovery. Some examples of this would be to ensure that all plant and equipment used during the recovery are fitted with armour glass in windows.

18. Maintenance

All mobile equipment must be placed on a planned maintenance program. Records of maintenance complete on mobile equipment will be available if requested. All maintenance schedules must be followed as required.

19. Equipment Breakdown

In the event of a breakdown, whenever possible the equipment operator shall park the vehicle out of the way of other traffic. The operator of the vehicle shall only leave the vehicle if it has been made fundamentally stable.

In addition:

- All broken down equipment shall be left with parking and hazard lights turned on.
- Orange traffic delineators (or flashing amber lights at night) shall be placed 50m to the front and rear of the vehicle to warn other vehicle drivers of the hazard.
- If required, a traffic controller may be used to direct traffic around the broken-down equipment where a visibility hazard exists.

20. Road Rules

17.1. Speed Limits

While traveling in the Fisherman's landing exclusion zone that is not covered by the project boundaries the sign posted speed limits apply. While moving equipment around the demarcated project area a 20km/h speed limit will apply.

17.2. Seat Belts

All vehicles and mobile equipment must be fitted with seat belts, and all drivers and passengers will wear seat belts when driving or operating the vehicle no matter the case.

17.3. Public Roadways

All haulage and transport equipment and Heavy Equipment must comply with Queensland Road legislation when travelling on a public roadway including but not limited to, speed limits, give way rules, overtaking and load and capacity regulations. All site access will be via the south.

17.4. Overtaking

No vehicle is permitted to overtake on site.

17.5. Give Way

The following rules apply to determine who has the right of way:

- A light vehicle shall give way to another light vehicle in accordance with Queensland Road Rules.
- A light vehicle shall always give way to any piece of HME/ MV regardless of the situation.
- A person shall give way to all vehicles and mobile equipment.

17.6. Distance between Vehicles

A driver must maintain a sufficient distance behind another vehicle whilst travelling so that the driver can, if necessary; stop safely to avoid a collision with the vehicle. Aestec operate a 50m / 20m / 10m process to manage interactions between SME and other plant.

All vehicles must maintain a minimum of 50 metres clearances while travelling behind surface mobile equipment.

At 50 metres of the Surface Mobile Equipment (SME):

- The approaching vehicle operator must make positive verbal communication with the SME operator and receive authority to enter.

At 20 metres of the Surface Mobile Equipment (SME):

- The SME must stop activity and ground engaging tools (GET) must be grounded or JHA completed (except where physical separation is present).

At 10 metres of the Surface Mobile Equipment (SME):

- The Ground Engaging Tools (GET) must be grounded, and the SME Operator must be out of the cab.

Less than 10 meters of an Operating SME a team-based risk assessment (TBRA) is required. Controls must include:

- The workers must have continuous positive verbal communication with the SME Operator.

17.7. Mobile Phones

Mobile phones are not to be used while driving any vehicle on site.

21. Vehicle Pre-Operational Inspections

A Vehicle Pre-Operation Check shall be conducted on all vehicles, as a minimum, at the start of each shift where the vehicle will be in use.

Any non-conforming prestart shall be reported to supervision immediately and tagged out of service if determined necessary by the Project Manager.

REFERENCES

- Queensland Road Rules
- Transport Operations (Road Use Management – Vehicle Standards and Safety) Regulation 2010.

DOCUMENT CONTROL

1. Key Information

Title:	AS-PL-012 Traffic Management Plan
Prepared By:	IMS Specialist (Paul Zomer)
Approved By:	Construction Manager (Daryl Henderson)
Date Effective From:	16th July 2025
Version Number:	1.0
Review Frequency:	Every 5 years or in conjunction with policy/procedure updates
Next Review Date:	16th July 2029
Contact(s):	IMS Specialist (Paul Zomer) Construction Manager (Daryl Henderson)

2. Revision History

Version:	Date:	Summary or Changes:	Initials:	Changes Marked:
V1.0	16/07/2025	Document Created	P.Z.	No

3. Approvals

Name/Title:	Date:	Version:
Construction Manager (Daryl Henderson)	16/07/2025	V 1.0

4. Distribution

This document has been distributed to:

Name/Title/Team:	Distribution Method:	Date of Issue:	Version:
Project Team	Management Meetings, Project Team Meetings, Site Inductions.	10/07/2024	V 1.0

5. Linked Documentation

(documents that have been linked or referenced to in the text of this document)

Document Title:	Document File Path:
AS-PL-008 Health and Safety Management Plan	
AS-PL-009 Environmental Management Plan	
AS-PL-010 Emergency Response Plan	
AS-PL-012 Traffic Management Plan	
AS-SOP-038 Safe Operating Procedure (Mobile Devices)	

AS-HR-023 Mobile Device Authorisation form	

AESTEC SERVICES

BUILDING * PLUMBING * CIVIL

AS-PL-014

EROSION & SEDIMENT & STORM WATER CONTROL PLAN

Version: 1.0

Caustic Transfer Sump Pump

1. INTRODUCTION

1. General Overview

Aestec Services (Aestec) is committed to sustainable development throughout operations which covers all areas of the organisation. Continual improvement in environmental performance will be achieved by setting objectives, measuring progress, and communicating results.

To deliver on Aestec's Erosion and Sediment Control Plan & Storm Water, Aestec will:

- Communicate Aestec's Environmental Policy and Procedures to all employees;
- Comply with all applicable environmental laws, regulations, statutory obligations, and relevant voluntary codes of practice;
- Make business decisions that work towards achieving sustainable development;
- Ensure that our employees, subcontractors, suppliers, and consultants are aware of and have the necessary skills to fulfil their environmental obligations with respect to operations;
- Strive to conserve resources, reduce waste, and eliminate or minimise adverse environmental effects and risks that may be associated with our services and operations;
- Collaborate with our clients and other stakeholders to help them achieve their environmental objectives and obligations;
- Periodically review and revise our Environmental Policy and Procedures to maintain their relevance.

We will respond to the environmental challenges in all areas of our business, and it is the responsibility of every employee to implement this plan.

1.1. Scope

This document describes the Erosion and Sediment Control Plan (ESCP) to be used to ensure impact to the environment is managed and controlled. This document will be reviewed and accepted by an Engineer prior to distribution and implementation. Work undertaken by Aestec will follow a consistent workflow / process as described within this document. Deviations from these processes can only occur:

- Under specific instructions/direction of our client(s); and
- With written authorisation from Rio Tinto Leadership; and
- The Engineer.

1.2. Legislation & Relevant Guidelines

This document is based on the following:

- AS/NZS ISO 14001, Environmental management systems - Specification with guidance for use; and
- Soil Erosion and Sediment Control, Engineering Guidelines for Queensland Construction Sites, published by the Queensland Division of the Institution of Engineers Australia.
- Environmental Protection Act 1994 (EP Act) - key elements to assess environmental impacts.
- Environmental Protection Regulation 2019 - the project's relevant impacts are assessed under the regulation.
- Environmental Protection (Waste Management) Regulation 2000
- Environmental Protection (Air) Policy 2019
- Environmental Protection (Noise) Policy 2019
- Environmental Protection (Water and Wetland Biodiversity) Policy 2019

1.3. Definitions

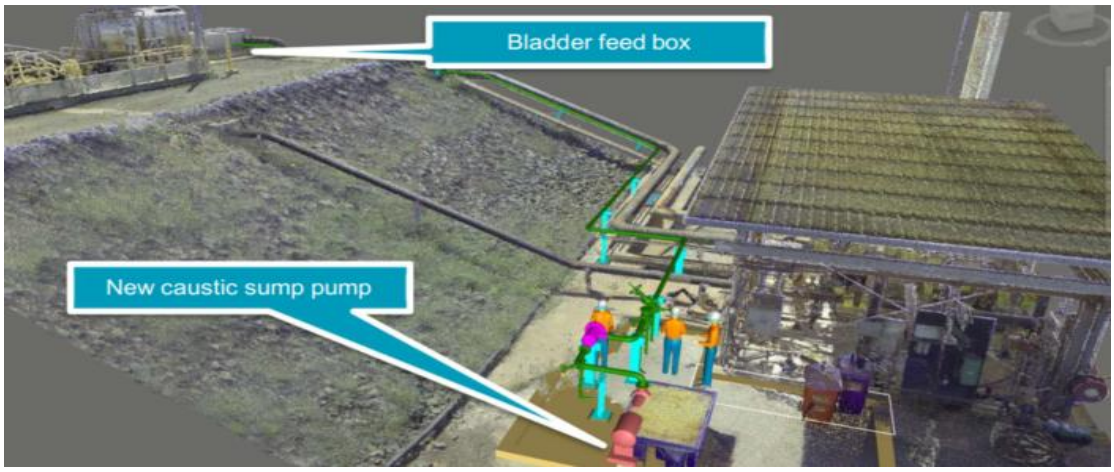
Term / Acronym	Definition
DESI	Department of Environment, Science, and Innovation.
Environment	Includes: a) ecosystems and their constituent parts, including people and communities; and b) all natural and physical resources; and c) the qualities and characteristics of locations, places, and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony, and sense of community; and d) The social, economic, aesthetic, and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).
Environmental Harm	Is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration, or frequency) on an environmental value, and includes environmental nuisance. May be caused by an activity: a) whether the harm is a direct or indirect result of the activity; or b) Whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.
Environmental Impact	Any change to the environment, whether adverse or beneficial or partially resulting from an organisation's activities, products, or services.
Environmental Nuisance	Is unreasonable interference or likely interference with an environmental value caused by: a) noise, dust, odour, light; or b) an unhealthy, offensive, or unsightly condition because of contamination; or c) Another way prescribed by legislation.
Environmental Value	Is: a) a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or b) Another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.
Rio Tinto	Rio Tinto Alcan Yarwun
Serious Environmental Harm	Is environmental harm (other than environmental nuisance): a) that causes actual or potential harm to environmental values that is irreversible, of a high impact or widespread; or b) that causes actual or potential harm to environmental values of an area of high conservation value or special significance; or c) that causes actual or potential loss or damage to property of an amount of, or amounts totalling, more than the threshold amount; or d) that results in costs of more than the threshold amount being incurred in taking appropriate action to: • prevent or minimise the harm; and

	• Rehabilitate or restore the environment to its condition before the harm.
The Company / Aestec	Aestec Services Pty Ltd
Waste	Includes anything that is: a) left over, or an unwanted by-product, from an industrial, commercial, domestic, or other activity; or b) Surplus to the industrial, commercial, domestic, or other activity generating the waste.

1.4. Scope of Work

The project focuses on maintaining the existing soil gradients, infrastructure and control stormwater for the duration of the Caustic Transfer Sump Pump Project. The project entails the excavation to install the sump pits for the Caustic Transfer Pump. The excavated material is deemed contaminated soil and is loaded directly into a truck during the excavation process eliminate and mitigate caustic exposure. The project will have open excavations for a short period of time which will have erosion and sedimentation controls including the diversion of storm water from work area.

1.4.1. Site Location



1.5. Roles and Responsibilities

1.5.1. General

All site personnel are responsible for conducting the works in accordance with the procedures and such that any potential impacts on the environment are eliminated or minimised.

1.5.2. Project Manager

The Project Manager is responsible for:

- The establishment, maintenance, and approval of this Erosion and Sediment Control Plan in accordance with the requirements of the contract;
- Provision of adequate and suitable resources;
- Ensuring that all Project employees have a clear understanding of the environmental requirements relevant to their area of work and their responsibilities within their areas of work;
- Chairing site meetings and ensuring environmental issues are included in the meeting agenda; and
- Ensuring that environmental reporting requirements are implemented.

1.5.3. HSE Specialist / HSE Advisor

The HSE Specialist / HSE Advisors are responsible for:

- Providing all necessary training including induction of all project personnel into project environmental matters;
- Reviewing construction methods to check that adequate environmental management measures are incorporated into the planning of particular construction processes; and
- Acting upon reports/observations of potential or existing environmental hazards as recorded in the monthly reports.

1.5.4. Project Supervisor

The Project Supervisor (both Company and Subcontractor) is responsible for:

- Ensuring that all construction activities are conducted in accordance with the specified sediment controls;
- Undertaking and reporting on the implementation and effectiveness of the specified sediment controls;
- Implementing corrective action to rectify sediment incidents and non-conformances identified on inspection reports in accordance with procedures, and
- Ensuring that no work commences prior to the submission of appropriate permits.

1.5.5. Leading Hand

Leading Hands (both Company and Subcontractor) is responsible for:

- Identifying and reporting any existing or potential adverse erosion and sediment impacts on site;
- Ensuring the work under their control is conducted in accordance with environmentally sound work practices; and
- Providing suitable leadership to labour and subcontractors with regard to erosion and sediment issues.

1.5.6. Employees

Employees (and subcontract employees) are responsible for:

- Complying with acceptable safe erosion and sediment practices; and
- Identifying and reporting any existing/potential adverse erosion and sediment impacts on site.

2. SURFACE & STORM WATER MANAGEMENT PLAN

2.1. Objective

The Management Plan has been developed to address environmental risks associated with the construction at the of the Caustic Transfer Sump Pump. The plan focuses on the implementation of best-practice storm water and sediment and erosion controls in line with DESI guidelines to minimise runoff, protect sensitive waterways, and ensure compliance with environmental regulations. Specific strategies include sediment barriers, water control, and regular inspections to mitigate impacts during all construction phases.

2.2. Sediment Control Measures

2.2.1. Silt Fences and Sediment Control Barriers

Sediment control barriers, including silt fences, will be strategically installed around excavation zones, stockpile areas, and along drainage pathways to prevent sediment-laden water from entering sensitive waterways. Weekly walks and monthly inspections will ensure structural integrity.

Fences will also be checked after heavy rainfall events, and any sagging, displacement, or sediment accumulation exceeding 50% of capacity will be rectified immediately. Barriers will be placed at downstream boundaries and flow exit points to intercept sediment runoff.

2.2.2. Spoil Stockpile Management

Spoil material generated during excavation will be carefully managed to mitigate requirements for erosion control and runoff due to storm water. Sediment fences or coir logs will areas to contain potential sediment runoff or redirect storm water flow.

2.2.3. Stabilisation of Exposed Surfaces

To minimise erosion risks, exposed soil surfaces will be stabilised promptly using best-practice methods. Erosion control blankets, mulch, or hydroseeding will be applied to exposed areas following excavation or backfilling. Sediment traps, inlet protection devices, and geotextile filters will be installed at drains to capture sediment before it enters the stormwater system. Where applicable, temporary diversion drains will be established to redirect surface runoff away from exposed work zones.

2.3. Storm Water and Wastewater Management

For stormwater will be managed in line with DESI and project-specific methodologies to prevent contamination of nearby waterways or other areas around project. Drilling fluids and slurry generated during excavation works will be captured in work area. Stormwater will be redirect where applicable away from work area. Wastewater and sediment will be collected and removed by Aestec Vacuum Trucks and transported to approved disposal facilities in compliance with regulatory standards.

To ensure the continued effectiveness of sediment control measures, a comprehensive inspection and maintenance schedule will be implemented. Monthly inspections will assess all sediment control measures, including silt fences, sediment traps, spoil containment, and water management systems. Key aspects of inspections will include checking for structural damage, sediment buildup, and breaches in containment systems. Repairs or replacements will be carried out promptly to prevent further runoff.

2.4.1. Post-Weather Event Inspections

Following significant rainfall events, immediate inspections will be conducted to assess:

- Condition and capacity of silt fences and sediment barriers.
- Erosion of exposed surfaces and any sediment discharge.
- Structural integrity of wastewater containment systems.
- Reinforcements or additional control measures will be implemented as necessary to mitigate risks.

2.4.2. Compliance and Reporting

Compliance with DESI environmental standards will be maintained through detailed monitoring, record-keeping, and reporting. All inspections and corrective actions will be documented. Records of sediment and water disposal will be maintained for auditing and regulatory purposes. Any sediment discharge events will be reported immediately to project managers and relevant regulatory authorities, with corrective actions undertaken.

3. Construction Phase Practices

Pollutant	Potential Source	Management/Maintenance Procedure	Proposed Treatment Device and Maintenance Procedure
Sediment and Eroded material	Excavated material, fill material, exposed ground	Provision of sediment and silt barriers to the site drainage entry and exit points	Coir Logs to be placed at all inlets to decrease sediment pass through into the sediment basin. Removal of excess sand/silt build-up at regular intervals and after every storm. Place to divert storm water where applicable
Dust	exposed ground	Covering the material or wetting it down at regular intervals	Coverage of material with plastic, geotextile, surface binding agents or regular watering
Litter	Refuse generated by staff	Construction waste is to be cleaned off the site area and disposed of into an industrial bin then removed by a refuse collection contractor	Industrial bin is to be provided within the construction area - to be emptied on weekly basis
Concrete	Washing of concrete trucks/tools to remove wet/unused concrete	Provision of a closed area onsite for washing off concrete slurries	Liquids to be removed by a waste collection contractor. Solids to be placed into a refuse bin
Surfactants (detergents)	Washing down operations on hardstand area using detergent	No cleaning of vehicles will be permitted on site	Monitoring and prevention
Chemical (Paints, thinners, etc.)	Typically, this may occur due to spillage of product	Where spills occur, the containment area is to stop escape. The material is to be treated (as required) and removed and cleaned by a licensed contractor. Minor spillage outside this area shall be cleaned up with cloths and disposed of to waste via the refuse bin.	A temporary containment area. This is to be impermeable and of a size to permit mixing/transfer, and with a storage volume of twice the largest container used. Treatment of spills is to occur on site. No discharge of treated water to the stormwater is to occur without council approval.
Storm & Waste water	Rain and wastewater from excavation as is close to tidal/water table level.	Storm water to be redirected and diverted to redirect away from excavation and work area.	Sediment fencing coir logs, sand bags.

4. DOCUMENT CONTROL

4.1. Key Information

Title:	AS-PL-014 Erosion & Sediment & Stormwater Control Plan
Prepared By:	IMS Specialist (Paul Zomer)
Approved By:	Project Manager (Tom Perkins)
Date Effective From:	25/06/25
Version Number:	V1.0
Review Frequency:	Every 5 years or in conjunction with policy/procedure updates
Next Review Date:	
Contact(s):	Project Manager (Tom Perkins), Document Controller (Paul Zomer)

4.2. Revision History

Version:	Date:	Summary or Changes:	Initials:	Changes Marked:
V1.0		Document Created and Approved by RPEQ.		No

4.3. Approvals

Name/Title:	Date:	Version:
Project Manager (Tom, Perkins)		V1.0

4.4. Distribution

This document has been distributed to:

Name/Title/Team:	Distribution Method:	Date of Issue:	Version:
Project Team	Management Meetings, Project Team Meetings, Site Inductions.		V1.0
Tom Perkins		25/06/25	
Shannon Christie		25/06/25	

4.5. Linked Documentation

(documents that have been linked or referenced to in the text of this document)

Document Title:	Document File Path:

AESTEC SERVICES

BUILDING * PLUMBING * CIVIL

AS-PL-011

ACID SULPHATE SOIL MANAGEMENT PLAN

Version: 1.0

1. DOCUMENT APPROVAL

1.1. Document Controller

Name:	Paul Zomer	**Position:**	IMS Specialist
Signature:		**Date:**	_____/_____/_____

1.2. Document Owner

Name:	Daryl Henderson	**Position:**	Construction Manager
Signature:		**Date:**	_____/_____/_____

2. INTRODUCTION

2.1. General Overview

Aestec Services (Aestec) is committed to sustainable development throughout operations which covers all areas of the organisation. Continual improvement in environmental performance will be achieved by setting objectives, measuring progress, and communicating results.

To deliver on Aestec's Environment sustainable management & development, Aestec will:

- Communicate Aestec's Environmental Policy and Procedures to all employees;
- Comply with all applicable environmental laws, regulations, statutory obligations, and relevant voluntary codes of practice;
- Make business decisions that work towards achieving sustainable development;
- Ensure that our employees, subcontractors, suppliers, and consultants are aware of and have the necessary skills to fulfil their environmental obligations with respect to operations;
- Strive to conserve resources, reduce waste, and eliminate or minimise adverse environmental effects and risks that may be associated with our services and operations;
- Collaborate with our clients and other stakeholders to help them achieve their environmental objectives and obligations;
- Periodically review and revise our Environmental Policy and Procedures to maintain their relevance.

We will respond to the environmental challenges in all areas of our business, and it is the responsibility of every employee to implement this plan.

2.2. Purpose

The purpose of this plan is to outline the procedures and control measures required to identify, manage, and mitigate the potential environmental and health risks associated with the disturbance of acid sulphate soils during construction or ground-disturbing activities.

This plan provides a framework to ensure that any actual or potential acid sulphate soils are appropriately assessed, handled, treated, and monitored in accordance with environmental legislation, regulatory guidelines, and industry best practices. The document is critical in preventing the generation and release of acid and associated contaminants, which can have harmful impacts on water quality, infrastructure, ecosystems, and human health.

2.3. Scope

This document describes the Acid Sulphate Soil Management Plan (ASSMP) to be used to ensure impact to the environment is managed and controlled. Work undertaken by Aestec will follow a consistent workflow/processes as described within this document. Deviations from these processes can only occur:

- Under specific instructions/direction of our client(s); and
- With written authorisation from RTY Yarwun representative.

The plan applies when land is disturbed below the 20 m Australian Height Datum (AHD) relief level of the land where pyritic soils (marine muds) exist and where there is potential for release of sulphide oxidation products, including the formation of acidic and/or saline soils and wastes, the release of low pH water or water with a neutral pH but elevated sulphate-dominated salinity or metals concentrations.

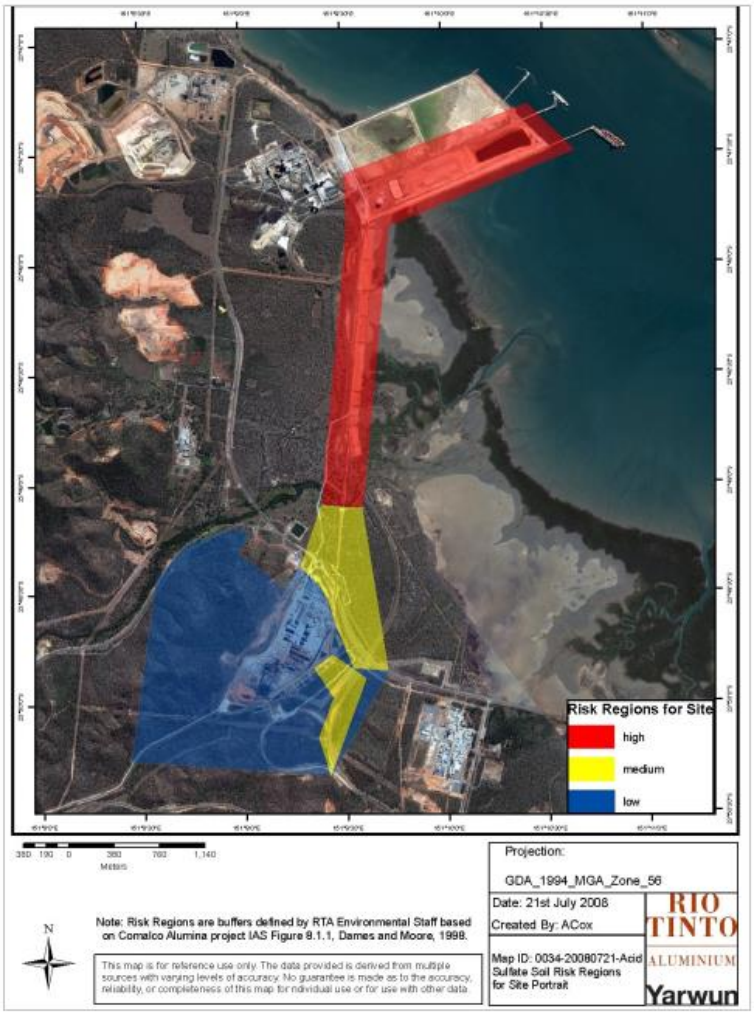


Figure 1 - Risk Regions on Site

3. DEFINITIONS & ACRONYMS

Acronym:	Term / Expression:	Definition:
-	Company / Aestec	AESTEC Pty Ltd
AHD	Australian Height Datum	AHD is the standard reference level for elevation (height) across Australia.
ASS	Acid Sulphate Soils	Acid sulphate soils (ASS) are natural sediments or soils containing iron sulphides, primarily pyrite, that can produce sulfuric acid when exposed to oxygen.
-	Acid Sulphate Soils Management Plan	Acid Sulphate Soils Management Plan describe how an action might impact on the natural environment in which it occurs and set out clear commitments from the person taking the action on how those impacts will be avoided, minimised, and managed so that they are environmentally acceptable.
DEHP	Department of Environment & Heritage Protection	-
DERM	Department of Environment and Resource Management	The Department of Environment and Resource Management (DERM) was formed on 26 March 2009 by merging the former Department of Natural Resources and Water and the former Environmental Protection Agency.
DESI	Department of Environment, Science, and Innovation.	-
-	Environment	Includes: a) ecosystems and their constituent parts, including people and communities; and

		b) all natural and physical resources; and c) the qualities and characteristics of locations, places, and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony, and sense of community; and d) The social, economic, aesthetic, and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).
-	Environmental Harm	Is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration, or frequency) on an environmental value, and includes environmental nuisance. May be caused by an activity: a) whether the harm is a direct or indirect result of the activity; or Whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.
-	Environmental Impact	Any change to the environment, whether adverse or beneficial or partially resulting from an organisation's activities, products, or services.
-	Environmental Nuisance	Is unreasonable interference or likely interference with an environmental value caused by: a) noise, dust, odour, light; or b) an unhealthy, offensive, or unsightly condition because of contamination; or c) Another way prescribed by legislation.
-	Environmental Value	Is: a) a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or b) Another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.
PASS	Potential Acid Sulphate Soils	Potential acid sulphate soils (PASS) are soils containing iron sulphides (like pyrite) that have the potential to produce sulfuric acid when exposed to air through drainage, excavation, or other disturbances.
PH	-	pH is a scale used to measure how acidic or basic (alkaline) a substance is, ranging from 0 (very acidic) to 14 (very alkaline), with 7 being neutral.
RMA	Residue Management Area	-
-	Serious Environmental Harm	Is environmental harm (other than environmental nuisance): a) that causes actual or potential harm to environmental values that is irreversible, of a high impact or widespread; or b) that causes actual or potential harm to environmental values of an area of high conservation value or special significance; or c) that causes actual or potential loss or damage to property of an amount of, or amounts totalling, more than the threshold amount; or d) that results in costs of more than the threshold amount being incurred in taking appropriate action to: • prevent or minimise the harm; and • Rehabilitate or restore the environment to its condition before the harm.
-	Waste	Includes anything that is: a) left over, or an unwanted by-product, from an industrial, commercial, domestic, or other activity; or

b) Surplus to the industrial, commercial, domestic, or other activity generating the waste.

Table 1 - Document Acronyms

4. LEGISLATIVE REQUIREMENTS

4.1. References and Related Documents

- Ahern C, Ahern M and Powell B.(1998), Guidelines for Sampling and Analysis of Lowland Acid Sulphate Soils (ASS) in Queensland, Department of Natural Resources and Mines, Indooroopilly, Queensland.
- Dear SE, Moore NG, Dobos SK, Watling KM and Ahern CR (2002). Soil Management Guidelines. In Queensland Acid Sulphate Soil Technical Manual. Department of Natural Resources and Mines, Indooroopilly, Queensland, Australia.
- Groundwork (2009). Rio Tinto Yarwun Residue Management Area (RMA), refinery and Caustic Bladder Hydrology Study. Queensland, Australia. www.groundwork.com.au.
- Queensland Department of Local Government & Planning (2002), State Planning Policy 2/02 – Planning and Managing Development Involving Acid Sulphate Soils.
- Queensland Department of Local Government & Planning (2002), State Planning Policy 2/02 Guidelines – Acid Sulphate Soils.
- Queensland Acid Sulphate Soil Investigation Team (QASSIT) (2004), Acid Sulphate Soils Laboratory Methods Guidelines Version 2.1
- Ross DJ, 2004, Acid Sulphate Soils Tannum Sands – Gladstone Area Central Queensland Coast, Department of Natural Resources and Mines Queensland.

Title:	Relevant Section(s):
AS/NZS ISO 14001 – Environmental Management Systems	**Section 6.1.2 – Environmental Aspects** • Identify environmental aspects and impacts associated with ASS disturbance. **Section 8.1 – Operational Planning and Control** • Implement procedures to manage and mitigate risks of acid generation, leachate, and contaminated runoff from ASS.
Soil Erosion and Sediment Control – Engineering Guidelines for Queensland Construction Sites	**Chapter 4 – Site Planning and Design** • Identify and map potential acid sulphate soils prior to disturbance. **Chapter 6 – Erosion Control Measures** • Install erosion and sediment controls to prevent mobilisation of acidic or metal-rich runoff from disturbed soils.
Environmental Protection Act 1994 (EP Act)	**Section 319 – General Environmental Duty** • Obligation to prevent or minimise environmental harm from disturbing ASS. **Section 320 – Duty to Notify Environmental Harm** • Requirement to notify the administering authority if ASS disturbance results in notifiable environmental harm. **Section 437 – Causing Serious or Material Environmental Harm** • Uncontrolled acid discharge may be a prosecutable offence under this section.
Environmental Protection Regulation 2019	**Schedule 1 – Environmentally Relevant Activities (ERAs)** • Activities disturbing ASS may trigger ERA thresholds requiring approval. **Part 3 – Environmental Impact Triggers** • Assessment of potential ASS disturbance impacts is required as part of an environmental authority application.

Environmental Protection (Waste Management) Regulation 2000	**Section 18 – Waste Classification** • Acid sulphate soils that require neutralisation or containment are classified as regulated waste. **Schedule 7 – Regulated Waste List** • Management, transport, and disposal of ASS as waste must comply with regulated waste controls.
Environmental Protection (Noise) Policy 2019	**Section 8 – Management of Noise Emissions** • Activities involving excavation and neutralisation of ASS must minimise noise impacts to surrounding areas.
Environmental Protection (Water and Wetland Biodiversity) Policy 2019	**Section 10 – Water Quality Objectives** • Prevent release of acidified runoff or leachate into waterways or wetlands from disturbed ASS. **Section 12 – Environmental Values of Aquatic Ecosystems** • Maintain the ecological health of nearby waterbodies by mitigating acid drainage and metal release from ASS.

Table 2 - Related Legislation

5. ACCOUNTABILITIES & RESPONSIBILITIES

Position:	Accountabilities / Responsibilities
All Site Personnel	• Follow all procedures to minimise or eliminate environmental impacts from ASS. • Ensure personal actions support environmentally responsible management of ASS.
Project Manager	• Establish, approve, and maintain the Acid Sulphate Soil Management Plan (ASSMP) as required by the contract. • Provide sufficient resources to support ASS management. • Ensure all project personnel understand their responsibilities relating to ASS. • Review HSEQ inspection reports and resolve ASS-related incidents or non-conformances. • Include ASS issues in site meetings and meeting agendas. • Ensure all ASS reporting requirements are implemented.
HSEQ Specialist / HSE Advisor	• Deliver training and induction sessions covering ASS issues for all personnel. • Review construction methods to verify incorporation of ASS controls. • Act on reports and observations of ASS risks or hazards identified in monthly reports.
Project Supervisor (Company and Subcontractor)	• Ensure all site activities comply with the ASSMP requirements. • Oversee all minor earthworks or stockpiling below 20m AHD on RTA Yarwun land in line with the ASSMP. • Monitor and report on the implementation and effectiveness of ASS controls. • Conduct Monthly HSE Inspection Reports (AS-SF-052). • Implement corrective actions for ASS-related incidents and non-conformances. • Confirm all relevant permits are submitted before work commences.
Leading Hand (Company and Subcontractor)	• Identify and report existing or potential ASS impacts. • Ensure work practices are environmentally sound and consistent with ASS requirements. • Provide leadership to labour and subcontractors on ASS-related issues.

Employees (Including Subcontractor Employees)	• Follow safe practices related to ASS management. • Identify and report any existing or potential adverse ASS impacts on site.

Table 3 - Responsibilities & Accountabilities

6. TRAINING & COMPETENCY

6.1. Site Inductions

All personnel employed on the project participate in Site Inductions. The environmental section of which shall:

- Introduce the:
  - Aestec's Acid Sulphate Soil Management Plan (ASSMP);
  - Reasons for the Policy – Acid Sulphate Soil duty of care and/or obligations;
  - Projects environmental awareness aspects:
- Review in detail those elements of the Acid Sulphate Soil Management Plan (ASSMP) which relate to the work to be conducted by the person or persons being inducted and their responsibilities under the Acid Sulphate Soil Management Plan (ASSMP); and
- Review procedures to be followed in the event of an emergency and report any incidents or accidents.

Aestec's environmental induction will form part of the site inductions in addition to client induction requirements. The client will be given the opportunity to review and comment on the induction content prior to delivery.

6.2. Communication

Communication of all relevant environmental issues, such as new procedures, products or identified environmental hazards shall be passed on to employees and sub-contractors during:

- Pre-start Meetings;
- Toolbox Meetings;
- Client Meetings: and
- Management Meetings.

All meetings shall encourage feedback from the attendees and shall seek to overcome any communication difficulties between all parties, e.g. (Technical interfaces, different work crews). A record shall be kept of the topics discussed at the Pre-start and Toolbox Meetings, and minutes shall be taken during all Client and Management Meetings.

Signage indicating environmental issues/requirements shall be clearly visible, kept in good repair, and promptly removed when no longer required.

6.3. Complaints

Aestec manages all Project Complaints through Aestec's Control of Non-Conforming Products Procedure, pursuant to which:

- All complaints regarding environmental performance will be referred to the PM;
- The following details relating to any environmental complaints will be recorded:
  - date of complaint,
  - name, address, and telephone number of complainant,
  - nature of complaint, (written description),
  - response action taken and date;
- Environmental incidents raised by regulatory authorities and incidents that could potentially lead to legal action will be reported immediately to the PM;

- Complaints will be actioned without delay and a written response forwarded to the complainant within 14 days of the complaint being received. In the event that a complaint cannot be resolved within the 14-day period, a further response will be forwarded to the complainant immediately resolution is achieved; and
- Action in response to any complaint/s of alleged property damage arising from the project will be initiated within 24 hours of the complaint/s being received, and such action will include cessation of the project related activity alleged to have caused the damage pending resolution of the complaint/s through negotiated agreement with the complainant/s or, if agreement cannot be negotiated, through arbitration.

6.4. Corrective & Preventative Actions

Project Personnel must notify the Project Supervisor and IMS Specialist of all environmental incidents so that immediate action can be undertaken. Environmental incidents will be investigated to prevent a repeat of the event and will include the following:

- Identifying the extent of the incident;
- Identifying and implementing the necessary corrective actions;
- Identifying the personnel responsible for conducting the corrective action;
- Identifying who was responsible for the incident so that additional training can be offered;
- Implementing or modifying controls necessary to avoid a repeat occurrence of the incident
- Documenting incident (including photos' if necessary); and
- Conducting follow up inspection of location where incident occurred and if necessary, implementation of monitoring program (e.g. water quality testing if incident was in waterway).

All Corrective and Preventative actions are undertaking in accordance with Aestec's Corrective Action & Improvement Procedure. Implementation of this EMP will assist in the prevention of environmental incidents.

The Project Manager should daily monitor weather forecasts to determine if storm events are likely.

It is the Project Manager's responsibility to distribute the information to the wider project team. This will enable the project team to ensure control measures are able to minimise the impacts of the storm.

6.5. Management Review

6.5.1. Weekly Reviews

The effectiveness and proper implementation of this Acid Sulphate Soil Management Plan (ASSMP) will be reviewed weekly. Items to be reviewed include:

- Environmental performance on current and completed work.
- Investigation into incidents, complaints, and non-conformance.
- Changes to construction activities and control documents.
- The results of the weekly environmental report.
- Follow up on outstanding corrective actions.

Weekly reviews shall be documented. The Project Manager shall review these reports. Where necessary, an Action Plan shall be developed to address each of the environmental issues identified on site (air emissions, noise, hazardous materials, waste disposal, housekeeping, spillage is etc.).

Actions to be taken are delegated and remain "live" at subsequent meetings until the issue is satisfactorily closed out.

6.5.2. Monthly Reports

The Project Manager shall ensure the timely production of the Project Monthly Report which shall contain a section on environmental issues.

6.5.3. Management Review

The Project Manager shall conduct a review with the HSE Advisor every month by examination of the environmental statistics for that month. Other Project reviews shall take place as a result of environmental audits. Any identified or documented improvements to the safety system shall be considered and, if suitable, implemented. Other sources of information for improvement shall be from suggestions from employees, employees, the Client, or the public.

A review of the Acid Sulphate Soil Management Plan (ASSMP) shall be undertaken following scheduled audits, by the Project Manager, Project Supervisors and HSE Advisor. This review shall include, but not be limited to:

- An evaluation of the suitability of the Acid Sulphate Soil Management Plan (ASSMP);
- A review of performance as measured by the performance indicators;
- An evaluation of the continuing effectiveness of the Project Environmental Management Plan in the light of:
  - changing legislation;
  - changing Client expectations;
  - changes in activities;
  - changes in the Project Organisational structure;
  - advances in science and technology;
  - reviews of incidents and injuries;
  - reporting and communication; and
  - Employee feedback.

Suggested improvements shall be discussed with the Project Manager for input and approval of any corrective or preventive action to improve Project environmental management and the Acid Sulphate Soil Management Plan (ASSMP).

7. ACID SULPHATE SOILS

Acid Sulphate Spoils (ASS) are soils containing iron sulphides (commonly pyrite) which has the potential to produce sulphuric acid if they are disturbed or excavated. Acid sulphate soils occur naturally over extensive low-lying coastal areas, predominantly below 5 metres AHD. The presence of ASS may not be obvious on the soil surface as they are often buried beneath layers of more recently deposited soils and sediment.

Exposed/ disturbed ASS can:

- Have significant adverse effects on the ecology of wetlands and shallow freshwater and brackish aquifer systems by degrading water quality, habitat, and dependent ecosystems;
- Have significant adverse consequences upon commercial and recreation fisheries and crop productivity;
- Corrode concrete and steel infrastructure, such as culverts, pipes and bridges, reducing their functional lifespan. An example of the severity of ASS was the sudden collapse of a bridge in the Northern Territory due to corrosion of the concrete pylons.; and
- Lead to toxic concentrations of acid and metal contaminants which can cause dermatitis, while dust from disturbed acid sulphate soils may cause eye irritation.

7.1. Environmental Licences, Permits, and Approvals

No Licences, Permits or approvals other than authorisation from RTY Yarwun are required under this project as the relevant processes have already been implemented by RTY Yarwun.

8. MINIMUM REQUIREMENTS

8.1. Identification of Potential Acid Sulphate Soils

The potential effects of disturbing ASS (PASS) are to be addressed by contract supervisors during the investigation process as a part of the project planning process. The requirements of this plan apply to all proposed development that will disturb, remove, build upon, excavate or work land, soil and sediment at RTA Yarwun below 20 m AHD

Excavating/disturbing soils or placing fill or any structure (roads, buildings and heavy infrastructure) on land below 5 m AHD shall be deemed to be acid sulphate soil. Areas where projects may trigger this Plan are provided below.

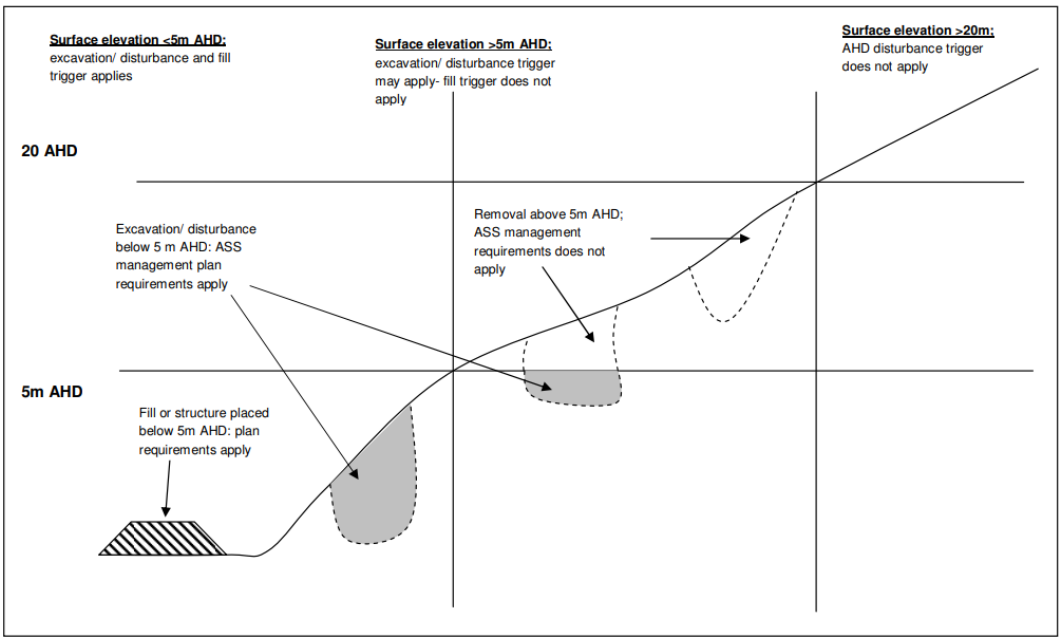


Figure 2 - Surface Elevation <5m ADH

If there is PASS the soil sampling shall occur Guidelines for Sampling and Analysis of Lowland Acid Sulphate Soils in Queensland (Ahern et al 1998) shall be used, or alternatively, the soil may be deemed ASS depending upon the risk to the environment, risk to the project schedule and advice from the Specialist Environment.

8.2. Management and Treatment of Acid Sulphate Soils

If ASS or PASS is confirmed:

- A job-specific ASS risk assessment (Rio Tinto level 2 Risk Assessment Form) shall be completed. As a minimum, the risk assessment shall include the requirements set out in Appendix A.
- The ASS risk assessment shall include determine the risks associated with both on- and off-site impacts. The risk assessment shall be used to determine the appropriate treatment and management options for the soil/mud. Options for the treatment and management of ASS shall be undertaken in accordance with the Queensland Acid Sulphate Soil Technical Manual (Dear et al 2002) available from the Specialist Environment.
- The risk assessment shall be approved by the RTA Yarwun Environment Specialist before conducting any work within an area that has be identified as having ASS or PASS. This will ensure that the management and treatment options employed are sufficient and that all legislative obligations have been satisfied.

8.3. Storage of Acid Sulphate Soils

Stockpiling is not the preferred option for ASS and is therefore only to be undertaken as a short-term activity and with the approval of the Specialist Environment and Area Owner where the stockpile is located. ASS and ARD potential material may only be temporarily stockpiled for durations in accordance with below.

Type of Material		**Duration of stockpiling**	
Texture range (McDonald *et al.* 1990)	Approx clay content (%)	Days	Hours
Coarse texture Sands to loamy sands	≤5	Overnight	18 hours
Medium texture Sandy loams to light clays	5–40	2½ days	70 hours
Fine texture Medium to heavy clays and silty clays	≥40	5 days	140 hours

Figure 3 - Stockpiling Durations

The total volume of material that is placed in short-term stockpiles should not exceed 20% of a day's total extraction.

Examples of when stockpiling may be approved include;

- Stockpiling small quantities over a weekend before reburial;
- Stockpiling due to inclement weather;
- Delays in receiving laboratory results; or
- Delays in neutralising/treatment.

9. DISPOSAL OF ASS/ARD AT THE RMA

Disposal is the least preferred option for mineral waste according to the hierarchy of controls. However acid waste into the caustic solids is an approved method of disposal if well planned and executed.

Disposal of ASS or ARD may occur at the RMA if all other treatment avenues have been evaluated and assessed. Reasons for disposing of ASS or ARD at the RMA include:

- Extensive cost associated with treatment;
- The residual environmental risk from available treatment/ management options is too high i.e. to protect sensitive receptors; and
- Unrealistic requirement for ongoing maintenance and monitoring.

A disposal plan is to be prepared prior to disposal and approved by the Superintendent RMA on the excavation permit form and linked to the risk assessment so the Specialist Environment is aware of the risks to the environment.

The disposal plan shall be approved by both the Specialist Environment and the Superintendent RMA with reference to:

- Health and safety of our employees, the community and public;
- Trucking schedule (include number of trucks, number of trips and total duration of disposal operations);
- Traffic impacts and management;
- Dust potential and management; and
- Disposal location and methodology (in conjunctions with the requirements of this plan and in consultation with RMA superintendent)

A disposal plan template is provided in Appendix B. A copy of the disposal plan is to be provided to the permit issuer. A copy is also to be presented to the RMA Superintendent and Community Relations Specialist at least 5 business days before disposal operations.

The RMA Superintendent is responsible for designating a suitable disposal area. The preferred option is to blend the acidic earth to gain some beneficial neutralising potential. The least preferred option is to dump the ASS in a dry area away from the mud farm where it will need to be actively managed until neutralised or buried.

Quantities and locations of ASS at the RMA shall be recorded and included in mineral waste reports to the Manager Environment each month. Acid sulphate soil disposal shall be audited as part of the waste management plan audit. RMA team member will also be visually assessing the mineral waste dumps, as will the annual dam safety engineers. Groundwater bores are monitored quarterly for contamination.

10. APPROVALS

An excavation permit shall be obtained from the Engineering Team, citing approval from the Specialist Environment, prior to disturbing the ground below the 20 m AHD mark. This plan is triggered during the permit approval process. The initial ASS/PASS determination shall be approved by the Specialist Environment and the ASS/RMA Disposal Form (Appendix B) is to be completed prior to the disposal of ARD and ASS at the RMA.

11. SCOPE OF WORK

This scope details the Works included to safely supply, fabricate, assemble, install and test the new caustic transfer station sump pump with all associated piping and steelwork inclusive of all quality assurance tasks.

Refer to 180GSW8004 Rio Tinto Yarwun Projects Caustic Transfer Station Sump Pump.

11.1. Site Location

The scope of works will be carried out at the caustic sump located at Area 180 as depicted below.

Figure 4 - Caustic Sump Location

11.2. Battery Limits

The battery limits and for the Works are detailed on P&IDs P03-180Z(2D)10106 and P06-180Z(2D)10102. There is only 1 tie-in point for this project which is TI-180-026 on the bladder feed box.

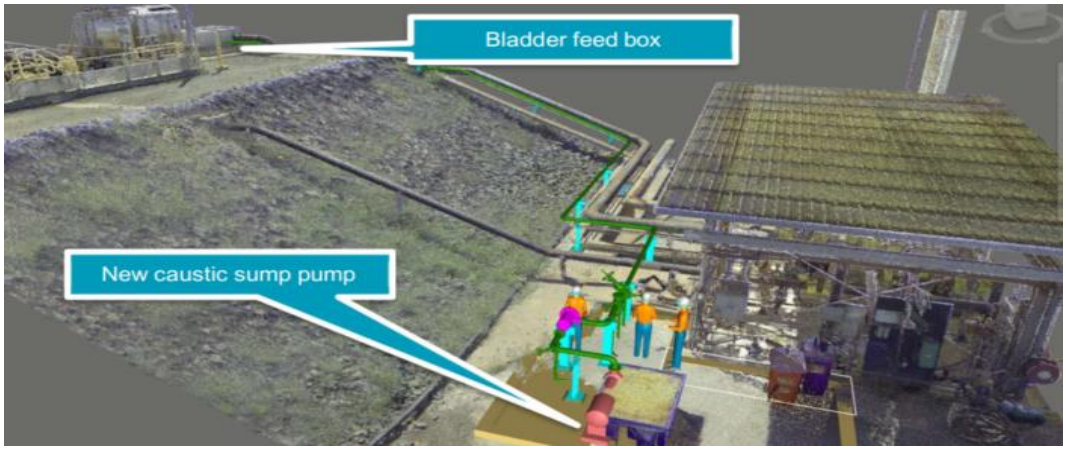


Figure 5 - Caustic Sump Operations

12. TABLES & FIGURES

12.1. Tables

12.2. Figures

13. DOCUMENT CONTROL

13.1. Key Information

Document Title:	AS-PL-009 Acid Sulphate Soil Management Plan	**Effective Date:**	_____/_____/_____
Prepared By:	IMS Specialist (Paul Zomer)	**Approved By:**	Construction Manager (Daryl Henderson)
Current Version:	(As per Document Register)	**Version Date:**	_____/_____/_____
Review Date:	_____/_____/_____	**Review Frequency:**	3 Years
Document Controller:	IMS Specialist (Paul Zomer)	**Document Owner:**	Construction Manager (Daryl Henderson)

13.2. Revision/Modification History

Version:	Execution Date:	Author	Summary of Changes	Initials:
1.0	_____/_____/_____	Paul Zomer	Document Created.	P.Z.

13.3. Communication & Distribution

Distributed To:	Distribution Method:	Date of Issue:	Version:
Project Team	Pre-Start Meetings	_____/_____/_____	1.0

13.4. Linked Documentation

(documents that have been linked or referenced to in the text of this document)

Registration No:	Document Title:	Document File Path:	Issue Date:	Version No:
AS-PO-003	Environmental Policy Statement	C:\Droplink\5. Aestec Server IMS\2. Document Control\1. Policy Statements	08/01/24	5.0
AS-PR-001	Document Control Plan	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Plans	07/05/25	4.2
AS-PR-005	Corrective Action & Improvement Procedure	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Plans	02/06/25	3.2
AS-PR-006	Risk & Opportunity Management Procedure	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Plans	05/02/25	3.4

APPENDIX A – ASS/ARD RISK ASSESSMENT GUIDELINES

- Overview the physical characteristics and environmental attributes of the site, including:
  - geology and hydrogeology of the site; and
  - presence of sensitive environmental receptors including surface water bodies and groundwater. Maps are available from the Specialist Environment
- Describe the occurrence of ASS or ARD on the site, including;
  - a map of the site distribution of ASS or ARD; and
  - results of the preliminary ASS or ARD assessment.
- Overview of the proposed works including:
  - the dewatering and drainage strategies;
  - the soil excavation strategy;
  - delineation of any clay and peat lenses and horizons that may affect dewatering or excavation of soil;
  - temporary storage of ASS or ARD, if proposed; and
  - reuse / disposal of excavated ASS or ARD.
- Detail the potential on-site and off-site effects of the disturbance. Include a risk assessment, which shall be used to determine the appropriate treatment and management options;
- Describe the management and treatment strategies to minimise impacts from the site works. Options for the treatment and management of ASS or ARD shall be undertaken in accordance with the Queensland Acid Sulphate Soil Technical Manual (Dear et al 2002) and include:
  - strategies for preventing the oxidation of iron sulphides (including avoiding the disturbance of ASS or ARD by redesigning layout of the excavations and/or re-flooding of potential ASS or ARD to limit oxidation);
  - treatment strategies for ASS or ARD (including neutralisation of ASS, use of lime/limestone barriers, burial of potential ASS);
  - strategies for management of the water table level on and off-site both during and
  - post construction; and
  - containment strategies to ensure that all contaminated storm water and acidic leachate associated with the oxidation of ASS or ARD is prevented from entering the environment both in the short and long-term;
- Develop performance criteria to assess the effectiveness of the ASS or ARD management and monitoring measures;
- Describe the contingency procedures to be implemented on the site to deal with unexpected events or in the event of failure of management procedures.
- Develop a monitoring program for soils and surface and ground water quality should be designed to enable the effectiveness of the management strategy to be assessed.

If in doubt contact the Specialist Environment for assistance or further information.

APPENDIX B – RMA ASS/ARD DISPOSAL FORM (RTY COPY)

Date	/ /	**Project no#**		

Note for applicant:
•This application is to be completed and signed off by the relevant authorisers prior to the commencement of works that will result in the disposal of ASS or ARD materials at the RMA
•Additional documentation and drawings may be required to support elements of this application. Failure to supply these may delay the approval of any development.

Project Description	
Project location and timeline	**(What ,when and where)**
List of Attachment (if applicable)	

Information Required	**Comment/ Action Taken**
What is the volume of ASS/ARD to be disposed of at the RMA	
Has a sampling regime been conducted to confirm the presence of ASS or ARD?	**(Attach analysis results)**
What is the material that is to be disposed of: composition, reactivity, potential hazards and handling issues?	
Has an ASS/ARD management plan been completed?	**(Attach management plan)**
Has all other options been assessed?	**(Attach treatment option assessment)**
What are the key benefits to HSEC and the business that will be achieved through disposal at the RMA?	
Has TPI been contacted to advise on transportation and tracking requirements?	
Has a disposal plan been developed	**(attach disposal plan)**
Additional comments or mitigation	

measures?		
Disposal Plan		
What is the expected deliver date to the RMA?		
Where has the RMA Superintendent suggested dumping ASS/ARD? (map)		
Is ASS within an active mud farming area (GPS location)?		
Is the mixing ratio agreed by technical team or ASS/ARD technical expert/consultant?		
Is there potential for runoff from the ASS/ARD to enter stormwater drain or waterway or impact off-site location/		
Are there any stockpiles at the RMA greater than 2 weeks old?		
Are there any residual risks that need to be risk assessed by the Specialist Environment or Superintendent RMA?		
Approvals		
Initiator	**Name**	
	Signature	
	Date	
Specialist Environment	**Name**	
	Signature	
	Date	
RMA Superintendent	**Name**	
	Signature	
	Date	
Area Manager	**Name**	
	Signature	
	Date	
	Signature	
	Date	

AESTEC SERVICES

BUILDING * PLUMBING * CIVIL

AS-PL-009

ENVIRONMENTAL MANAGEMENT PLAN

Version: 1.0

PY368H – Caustic Transfer Station Sump Pump

RTY Yarwun

INTRODUCTION

1. General Overview

Aestec Services (Aestec) is committed to sustainable development throughout operations which covers all areas of the organisation. Continual improvement in environmental performance will be achieved by setting objectives, measuring progress, and communicating results.

To deliver on Aestec's Environment sustainable management & development, Aestec will:

- Communicate Aestec's Environmental Policy and Procedures to all employees;
- Comply with all applicable environmental laws, regulations, statutory obligations, and relevant voluntary codes of practice;
- Make business decisions that work towards achieving sustainable development;
- Ensure that our employees, subcontractors, suppliers, and consultants are aware of and have the necessary skills to fulfil their environmental obligations with respect to operations;
- Strive to conserve resources, reduce waste, and eliminate or minimise adverse environmental effects and risks that may be associated with our services and operations;
- Collaborate with our clients and other stakeholders to help them achieve their environmental objectives and obligations;
- Periodically review and revise our Environmental Policy and Procedures to maintain their relevance.

We will respond to the environmental challenges in all areas of our business, and it is the responsibility of every employee to implement this plan.

2. Scope

This document describes the Environmental Management Plan (EMP) to be used to ensure impact to the environment is managed and controlled. Work undertaken by Aestec will follow a consistent workflow/processes as described within this document. Deviations from these processes can only occur:

- Under specific instructions/direction of our client(s); and
- With written authorisation from RTY Yarwun representative.

3. Legislation & Relevant Guidelines

This document is based on the following:

- AS/NZS ISO 14001, Environmental management systems - Specification with guidance for use; and
- Soil Erosion and Sediment Control, Engineering Guidelines for Queensland Construction Sites, published by the Queensland Division of the Institution of Engineers Australia.
- Environmental Protection Act 1994 (EP Act) - key elements to assess environmental impacts.
- Environmental Protection Regulation 2019 - the project's relevant impacts are assessed under the regulation.
- Environmental Protection (Waste Management) Regulation 2000
- Environmental Protection (Air) Policy 2019
- Environmental Protection (Noise) Policy 2019
- Environmental Protection (Water and Wetland Biodiversity) Policy 2019

4. Definitions

Term / Acronym	Definition
DERM	The Department of Environment and Resource Management (DERM) was formed on 26 March 2009 by merging the former Department of Natural Resources and Water and the former Environmental Protection Agency.
DESI	Department of Environment, Science, and Innovation.
Environment	Includes: a) ecosystems and their constituent parts, including people and communities; and b) all natural and physical resources; and c) the qualities and characteristics of locations, places, and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony, and sense of community; and d) The social, economic, aesthetic, and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).
Environmental Harm	Is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration, or frequency) on an environmental value, and includes environmental nuisance. May be caused by an activity: a) whether the harm is a direct or indirect result of the activity; or b) Whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.
Environmental Impact	Any change to the environment, whether adverse or beneficial or partially resulting from an organisation's activities, products, or services.
Environmental Nuisance	Is unreasonable interference or likely interference with an environmental value caused by: a) noise, dust, odour, light; or b) an unhealthy, offensive, or unsightly condition because of contamination; or c) Another way prescribed by legislation.
Environmental Value	Is: a) a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or b) Another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.
Serious Environmental Harm	Is environmental harm (other than environmental nuisance): a) that causes actual or potential harm to environmental values that is irreversible, of a high impact or widespread; or b) that causes actual or potential harm to environmental values of an area of high conservation value or special significance; or c) that causes actual or potential loss or damage to property of an amount of, or amounts totalling, more than the threshold amount; or d) that results in costs of more than the threshold amount being incurred in taking appropriate action to:

	• prevent or minimise the harm; and • Rehabilitate or restore the environment to its condition before the harm.
Environment Management Plan (EMP)	Environmental management plans describe how an action might impact on the natural environment in which it occurs and set out clear commitments from the person taking the action on how those impacts will be avoided, minimised, and managed so that they are environmentally acceptable.
The Company / Aestec	Aestec Services Pty Ltd
Waste	Includes anything that is: a) left over, or an unwanted by-product, from an industrial, commercial, domestic, or other activity; or b) Surplus to the industrial, commercial, domestic, or other activity generating the waste.

5. Scope of Work

This scope details the Works included to safely supply, fabricate, assemble, install and test the new caustic transfer station sump pump with all associated piping and steelwork inclusive of all quality assurance tasks.

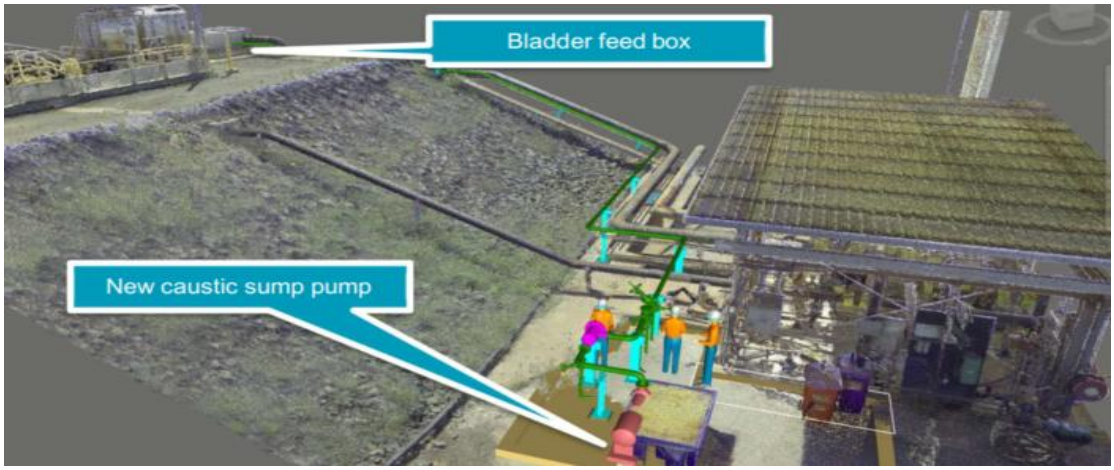
Refer to 180GSW8004 Rio Tinto Yarwun Projects Caustic Transfer Station Sump Pump.

5.1. Site Location

The scope of works will be carried out at the caustic sump located at Area 180 as depicted below.

5.2. Battery Limits

The battery limits and for the Works are detailed on P&IDs P03-180Z(2D)10106 and P06-180Z(2D)10102. There is only 1 tie-in point for this project which is TI-180-026 on the bladder feed box.



6. Environmental Policy

Aestec Services is committed to minimising environmental impact during operations, Aestec Services prioritises the prevention and protection of the environment through a continuous cycle of planning, implementing, reviewing of the actions required to improve the environmental and social sustainability obligations.

Aestec Services achieves environmental performance by:

- Considering our operational impact through continuous awareness, analysis, and what potential impact those operations may carry.
- Proactively undertaking control activities to minimise impact or other adverse effects on the air, water, land, natural resources, flora, fauna, humans, (including cultural) and their interrelation.
- Understanding environmental compliance within the State/Territory and ensuring a strict adherence in the fulfilment of those obligations.

Aestec Services observe three environmental aspects of its business undertaking:

- Resource consumption;
- Recycling; and
- Waste minimisation.

In this endeavour, Aestec Services will count compliance with all applicable environmental legislation as integral to achieving its objectives. With specific regard to achieving the broad Environmental objectives of this policy Aestec Services will ensure that adequate resources are provided to fulfil this commitment, and will:

- Develop and implement environmental, waste management and recycling initiatives;
- Provide staff with information guidelines and training that encourage responsible environmental, socially sustainable and waste management behaviour;
- Where possible, source efficient and environmentally sustainable products and services locally; and
- Encourage our staff to actively participate in our environmental and sustainable business practices, offering employees the opportunity to be a client sustainability champion.

Waste Management Plans for head office, workshop and job sites shall be developed and communicated to all employees, sub-contractors, and visitors. These plans shall include detailed information on how to recycle, reduce, handle, and dispose of waste for each site. We shall also adopt, and carry out responsibilities of, all Environmental Management/ Protection Plans of our clients where appropriate.

This policy, along with relevant environmental objectives & targets, shall be reviewed at least annually at our formal management review meetings.

7. Environmental Licences, Permits, and Approvals

No Licences, Permits or approvals other than authorisation from RTY Yarwun are required under this project as the relevant processes have already been implemented by RTY Yarwun.

8. Roles and Responsibilities

8.1. General

All site personnel are responsible for conducting the works in accordance with the procedures and such that any potential impacts on the environment is eliminated or minimised.

8.2. Project Manager

The Project Manager is responsible for:

- The establishment, maintenance, and approval of this Environmental Management Plan in accordance with the requirements of the contract;
- Provision of adequate and suitable resources;
- Ensuring that all Project employees have a clear understanding of the environmental requirements relevant to their area of work and their responsibilities within their areas of work;
- Reviewing the HSEQ Inspection reports prepared by the HSEQ Specialist and following up on any incidents/non-conformances until issue has been resolved;
- Chairing site meetings and ensuring environmental issues are included in the meeting agenda; and
- Ensuring that environmental reporting requirements are implemented.

8.3. HSEQ Specialist / HSE Advisor

The HSEQ Specialist / HSE Advisors are responsible for:

- Providing all necessary training including induction of all project personnel into project environmental matters;
- Reviewing construction methods to check that adequate environmental management measures are incorporated into the planning of particular construction processes; and
- Acting upon reports/observations of potential or existing environmental hazards as recorded in the monthly reports.

8.4. Project Supervisor

The Project Supervisor (both Company and Subcontractor) is responsible for:

- Ensuring that all construction activities are conducted in accordance with the specified environmental controls;
- Undertaking and reporting on the implementation and effectiveness of the specified environmental controls;
- Undertaking the Monthly HSE Inspection Reports (AS-SF-052 HSE Work Area Inspection)
- Implementing corrective action to rectify environmental incidents and non- conformances identified on inspection reports in accordance with procedures, and
- Ensuring that no work commences prior to the submission of appropriate permits.

8.5. Leading Hand

Leading Hands (both Company and Subcontractor) is responsible for:

- Identifying and reporting any existing or potential adverse environmental impacts on site;
- Ensuring the work under their control is conducted in accordance with environmentally sound work practices; and
- Providing suitable leadership to labour and subcontractors with regard to environmental issues.

8.6. Employees

Employees (and subcontract employees) are responsible for:

- Complying with acceptable safe environmental practices; and
- Identifying and reporting any existing/potential adverse environmental impacts on site.

TRAINING & COMPETENCY

1. Site Inductions

All personnel employed on the project participate in Site Inductions. The environmental section of which shall:

- Introduce the:
  - Aestec's Environmental Policy Statement;
  - Reasons for the Policy – environmental duty of care and/or obligations;
  - Projects environmental awareness aspects:
- Review in detail those elements of the Environmental Management Plan which relate to the work to be conducted by the person or persons being inducted and their responsibilities under the Environmental Management Plan; and
- Review procedures to be followed in the event of an emergency and report any incidents or accidents.

Aestec's environmental induction will form part of the site inductions in addition to client induction requirements. The client will be given the opportunity to review and comment on the induction content prior to delivery.

2. Communication

Communication of all relevant environmental issues, such as new procedures, products or identified environmental hazards shall be passed on to employees and sub-contractors during:

- Pre-start Meetings;
- Toolbox Meetings;
- Client Meetings: and
- Management Meetings.

All meetings shall encourage feedback from the attendees and shall seek to overcome any communication difficulties between all parties, e.g. (Technical interfaces, different work crews). A record shall be kept of the topics discussed at the Pre-start and Toolbox Meetings, and minutes shall be taken during all Client and Management Meetings.

Signage indicating environmental issues/requirements shall be clearly visible, kept in good repair, and promptly removed when no longer required.

EMERGENCY PREPARDNESS

1. General

Procedures for Spill Response are documented in Emergency Response Plan for this project. The basic principles of spill management are detailed below.

2. Spill Management

2.1. Sources

Potential exists for minor spills due to the construction activities. Main spill risks associated with this project are:

- Oil from plant lubrication spilling during servicing;
- Diesel from refuelling plant;
- Rupture of fuel/oil storage facilities
- Spillage of chemicals onto land
- Rupture of hydraulic lines
- Tracking of mud onto adjoining road

Transport will be in accordance with the project safety regulations, good practice, and manufacturer recommendations.

An appropriate spill kit, personal protective equipment, and relevant operator instructions/emergency procedure guides for the management of wastes, chemicals and flammable and combustible liquids associated with the activity must be kept at the site at all times. All personnel operating with wastes, chemicals or flammable and combustible liquids shall be trained in the use of the spill kit.

The spill response kit with clean up equipment will be stored adjacent to work activities and in the workshop container. The kit will contain absorbent pads and granules suitable for diesel, oil, and chemicals as well as personal protective equipment. Upon use, the spent adsorbent material will be disposed of in accordance with Aestec and Client waste procedures.

Appropriate bunding or other containment techniques will be used at identified hazard locations such as diesel/fuel storage. Hazardous waste spill management procedures shall be in accordance with the clients' specified spill and waste management procedures.

On site Emergency Management Plan will cover actions to be taken if a spill occurs. The Project Manager is the emergency contact in the event of a spill. Spill management, in order of priority is as follows:

- Ensure safety of any persons – either workers or others involved in the event;
- Control source;
- Contain spill;
- Notify relevant personnel;
- Clean up spill; and
- Correctly dispose of contaminated cleaned up material.

2.2. Waste Management

Our waste management objective is to minimise the amount of waste generated on-site as a result of Aestec's construction activities. The Performance indicator we measure ourselves against is that No contamination or environmental impact occurs on site during the construction phase.

More information on regulated waste management, including waste tracing requirements, management actions, responsibilities and corrective actions are outlined in Aestec's Waste Management Plan.

INCIDENT & ACCIDENT INVESTIGATION

Refer to Aestec's Incident Investigation Management & Reporting Procedure for the Standard Procedures for Incident Reporting and Investigation.

The Client is responsible for all communications with the public, and the Project Manager is responsible for ensuring that any agreed action to resolve environmental issues is conducted and followed up. All legitimate complaints will be documented, and then conveyed to the Client.

1. Inspections

Environmental issues shall be part of the Monthly Inspections. Refer to Aestec's Risk, Aspect & Opportunity Management Procedure for details on Monthly Inspection requirements.

Aestec's Safety Management Plan outlines Aestec's Safety related Key Performance Indicators.

Environmental audits shall be conducted monthly by the HSEQ Specialist or his assigned delegate.

2. Complaints

Aestec manages all Project Complaints through Aestec's Control of Non-Conforming Products Procedure, pursuant to which:

- All complaints regarding environmental performance will be referred to the PM;
- The following details relating to any environmental complaints will be recorded:
    - date of complaint,
    - name, address, and telephone number of complainant,
    - nature of complaint, (written description),
    - response action taken and date;
- Environmental incidents raised by regulatory authorities and incidents that could potentially lead to legal action will be reported immediately to the PM;
- Complaints will be actioned without delay and a written response forwarded to the complainant within 14 days of the complaint being received. In the event that a complaint cannot be resolved within the 14-day period, a further response will be forwarded to the complainant immediately resolution is achieved; and
- Action in response to any complaint/s of alleged property damage arising from the project will be initiated within 24 hours of the complaint/s being received, and such action will include cessation of the project related activity alleged to have caused the damage pending resolution of the complaint/s through negotiated agreement with the complainant/s or, if agreement cannot be negotiated, through arbitration.

3. Corrective & Preventative Actions

Project Personnel must notify the Project Supervisor and IMS Specialist of all environmental incidents so that immediate action can be undertaken. Environmental incidents will be investigated to prevent a repeat of the event and will include the following:

- Identifying the extent of the incident;
- Identifying and implementing the necessary corrective actions;
- Identifying the personnel responsible for conducting the corrective action;
- Identifying who was responsible for the incident so that additional training can be offered;
- Implementing or modifying controls necessary to avoid a repeat occurrence of the incident
- Documenting incident (including photos' if necessary); and
- Conducting follow up inspection of location where incident occurred and if necessary, implementation of monitoring program (e.g. water quality testing if incident was in waterway).

All Corrective and Preventative actions are undertaking in accordance with Aestec's Corrective Action & Improvement Procedure. Implementation of this EMP will assist in the prevention of environmental incidents.

The Project Manager should daily monitor weather forecasts to determine if storm events are likely.

It is the Project Manager's responsibility to distribute the information to the wider project team. This will enable the project team to ensure control measures are able to minimise the impacts of the storm.

MANAGEMENT REVIEW

1. Monthly Reviews

The effectiveness and proper implementation of this Environmental Management Plan will be reviewed weekly. Items to be reviewed include:

- Environmental performance on current and completed work.
- Investigation into incidents, complaints, and non-conformance.
- Changes to construction activities and control documents.
- The results of the weekly environmental report.
- Follow up on outstanding corrective actions.

Weekly reviews shall be documented. The Project Manager shall review these reports. Where necessary, an Action Plan shall be developed to address each of the environmental issues identified on site (air emissions, noise, hazardous materials, waste disposal, housekeeping, spillage is etc.).

Actions to be taken are delegated and remain “live” at subsequent meetings until the issue is satisfactorily closed out.

2. Monthly Reports

The Project Manager shall ensure the timely production of the Project Monthly Report which shall contain a section on environmental issues.

3. Management Review

The Project Manager shall conduct a review with the HSE Advisor every month by examination of the environmental statistics for that month. Other Project reviews shall take place as a result of environmental audits. Any identified or documented improvements to the safety system shall be considered and, if suitable, implemented. Other sources of information for improvement shall be from suggestions from employees, employees, the Client, or the public.

A review of the Environmental Management Plan shall be undertaken following scheduled audits, by the Project Manager, Project Supervisors and HSE Advisor. This review shall include, but not be limited to:

- An evaluation of the suitability of the Environmental Policy;
- A review of performance as measured by the performance indicators;
- An evaluation of the continuing effectiveness of the Project Environmental Management Plan in the light of:
    - changing legislation;
    - changing Client expectations;
    - changes in activities;
    - changes in the Project Organisational structure;
    - advances in science and technology;
    - reviews of incidents and injuries;
    - reporting and communication; and
    - Employee feedback.

Suggested improvements shall be discussed with the Project Manager for input and approval of any corrective or preventive action to improve Project environmental management and the Environmental Management Plan.

SITE CONTROLS

1. Noise & Vibration Management	
Potential Impacts:	The potential impacts of the project on existing noise and vibration levels are likely to be from increased traffic at the site, generators, earthmoving machinery, and other vehicles during the construction activities.
Management Objective:	To ensure that noise and vibration from activities associated with construction are within acceptable limits at all nearby receptors.
Performance Criteria:	Noise will be managed by limiting project activities where possible before 6am and after 6pm.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Preference shall be given while selecting plant and equipment for construction works to those, which minimise noise emissions.	Project Supervisor	Weekly checks shall be undertaken to ensure the manufacturers operating specifications are being complied with.	Where practicable, noisy plant equipment and processes will be substituted with alternatives.
Regular checks are to be undertaken to ensure all equipment and vehicles are in good working order and are operated correctly. Checking shall include: • Engine covers; • Defective silencing equipment; • Rattling components; and • Leakages in compressed air lines.	Project Supervisor Subcontractors	Undertake regular inspections & servicing of equipment and vehicles to ensure it is in good working order. Fortnightly checks shall be undertaken to ensure the manufacturers operating specifications are being complied with.	Undertake maintenance work on vehicles and equipment as identified during services and inspections. Schedule more regular maintenance/inspections as required.
Equipment not in use shall be shut down.	Operators	Daily inspections of the site will be undertaken to ensure that equipment not in use is shut down.	Re-train relevant employees to shut down equipment when not in use.
Trucking/Delivery routes to and from the site will be selected to minimise disturbance to residential areas and local traffic.	Project Supervisor Subcontractors	Regularly check transport routes to the construction site to ensure those recommended are being used.	Re-train relevant employees on nominated transport routes to and from the construction sites.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Noise complaints will be managed as per noise complaints system outlined above.	Project Supervisor Project Manager	Refer to Incident and Complaint Responses Section.	Refer to Incident and Complaint Responses Section.

2. Geology & Soils (PASS)	
Potential Impacts:	The potential impacts of the project on geology and soils are likely to be the redistribution of soils and subsequent sedimentation of water courses.
Management Objective:	To minimise disturbance to soils, during construction.
Performance Criteria:	Restrict soil disturbance as much as possible through staging areas of disturbance within the construction timeline; and Construction operations are to be undertaken in such a manner that contributes to the achievement of water quality guidelines contained in the Environmental Protection (Water and Wetland Biodiversity) Policy 2019.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Management of PASS/ASS present in the project area.	Project Manager Project Supervisor	Monitoring will be undertaken during construction activities according to regulatory guidelines. Soil monitoring not satisfactorily identify areas of PASS/ASS then sampling and monitoring methodology will be reviewed to improve effectiveness. Scope and frequency of reporting relative to PASS/ASS management will be by agreement with RTY Yarwun but will, as a minimum, comprise a Monthly report capturing the key criteria. If an incident occurs, this will be reported to the relevant statutory authority as per regulatory polices/guidelines.	Site induction/training in the monitoring and management of PASS/ASS to relevant contractors. If PASS/ASS is found, then appropriate management measures will be implemented as per DESI Policies/guidelines. Project design is to incorporate corrosion resistant design materials based upon field identification of acid sulphate soils, if required.

3. Air Quality	
Potential Impacts:	The potential impacts of the project on air quality are likely to be dust generation due to construction works.
Management Objective:	To minimise the impact of construction related vehicle, dust and particulate emissions on neighbouring residents and other sensitive receptors in the locality.
Performance Criteria:	Construction operations are to be undertaken in such a manner that contributes to the achievement of air quality guidelines contained in the Environmental Protection (Air) Policy 2019.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Restrict stripping and excavation activities during dry and windy conditions.	Project Supervisor	Monitor weather conditions daily to ensure activities likely to cause dust emissions are programmed for more suitable times.	Water construction site to suppress dust generated by unfavourable conditions. Postpone works to a time when atmospheric conditions are more suitable.
Regularly water the construction site and unsealed access roads during dry and windy conditions.	Project Supervisor	Monitor dust in the event of a validated complaint. Record all air quality (including odour) complaints, proposed corrective action and results.	Modify water suppression regime where practicable to meet performance criteria. Respond to dust complaints promptly as per complaints system established during monitoring and reporting phase.
Fit dust suppression and/or emission control devices to all equipment and machinery where available.	Project Supervisor	Monitors (visually) dust and exhaust emissions generated by vehicles and machinery. Particular attention should be made when vehicles are accelerating or leaving the site.	Vehicles, machinery, and other plant with excessive emissions will be shut down and maintenance will be undertaken to rectify the problem.
Notify local residents of any emissions and/or dust to be generated by any particular activity, machinery, or plant.	Project Supervisor	Monitor emissions generated by the activity, machinery or plant ensuring that the performance criteria are not exceeded. In the event of a validated complaint, monitor emissions as described above.	Notify residents as early as practicable.

4. Water Quality	
Potential Impacts:	The potential impacts of the project on water quality are likely to be: • increased suspended solids in stormwater runoff during construction works; • hydrocarbon pollution of stormwater and surface water from oil and fuel leaks/spills during construction and traffic conditions during operations; • chemical spillages from construction site and vehicle accidents along the road; and • Localised increase in litter from construction activity and traffic using the road.
Management Objective:	To establish and maintain drainage and soil protection system (comprising sediment and erosion control devices) which prevents erosion and does not decrease water quality during construction.
Performance Criteria:	All site discharges from disturbed areas to pass through erosion and sediment control devices. Implementation of Best Practice, in accordance with: • minimising disturbance; • drainage control; • erosion control; and • sediment control; All site discharges from construction sites and stormwater runoff will comply with the Environmental Protection (Water) Policy. Construction operations are to be undertaken in such a manner that contributes to the achievement of water quality guidelines contained in the Environmental Protection (Water and Wetland Biodiversity) Policy 2019.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Pre-Construction			
Ensure an Erosion and Sediment Control Plan (ESCP) is developed and put in place.	Project Manager	Conduct as part of establishment to site.	Install devices as recommended.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Baseline water quality data may be obtained in any nearby water catchments.	Project Manager	Parameters to comply with the Environmental Protection (Water and Wetland Biodiversity) Policy 2019.	Water quality testing to be obtained prior to commencement of works.
Erosion & Sediment Control			
Ensure all soil erosion and sediment control devices are installed prior to construction site establishment and/or site disturbance.	Project Supervisor	Inspect construction site to ensure all appropriate devices are installed. Sediment controls in place as per the site Facilities Map (sediment fences) Overall site is captured with the sediment ponds already constructed (northwest of job site) as part of previous works.	Install devices as recommended.
Run-Off			
Stormwater leaving the site should be visually monitored. If monitoring other than visual is requested by the Principal, it must be requested in accordance with the DESI Monitoring and Sampling Manual 2018.	Project Supervisor Project Manager	Parameters to comply with DESI Monitoring and Sampling Manual 2018.	If the Principal instructs other than visual monitoring, then frequency to be identified and followed.
Clearing of existing vegetation (e.g. grassed areas) should be minimised to prevent exposure of loose soil.	Project Supervisor	Clean water run-off is to be diverted away from disturbed or exposed surface areas including around stockpiles, material storage areas, fixed plant, and equipment locations.	Modify water diversion bunds or sediment controls to ensure.
No maintenance or refuelling activities is to occur within 30 metres of a waterway or drainage line.	Project Supervisor Operators	Conduct fuelling operations at designated areas or at go- line.	Train construction employees on requirements emphasising refuel procedure/s.
Stormwater Quality Control			
Check all construction vehicles and equipment weekly for fuel, oil, and chemical leaks.	Project Supervisor	Inspect vehicles and equipment regularly for leaks.	Investigate the replacement of vehicles/ equipment in the event that leaks continue.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Diesel fuel, chemicals and other hazardous material are stored in bunded areas.	Project Supervisor	Inspect areas regularly to ensure no chemicals stored incorrectly.	All chemicals to be removed from incorrectly stored areas.
Contain rubbish and waste materials in suitable facilities to ensure they do not litter stormwater drains.	Project Supervisor	Refer to the Waste Management Section.	Refer to the Waste Management Section.
Inspect all drainage, erosion, and sediment control structures to ensure sufficient capacity is available to contain storm events.	Project Supervisor Subcontractors	Inspect daily and immediately following storm events and maintain erosion and sediment control devices.	Emergency sediment control material (i.e. sediment fencing) to be stored on-site for the duration of construction works and implemented as required.
Cleaning of equipment and/or vehicles used during the construction will not be undertaken in areas that cause flow of untreated wastewater into drainage lines. Use of Aldoga wash facility to be utilised where possible.	Project Supervisor Subcontractors	Inspect drainage lines daily for signs of contamination. Refer to the Geology and Soils Section.	Refer to the Geology and Soils Section.
Mud Tracking Onto External Roads			
All vehicles exiting site are to traverse over a rumble strip to dislodge any mud hung up on body. Any mud tracked onto the road to be cleaned immediately with water truck. Personal carpark and access to it off the road to have gravel installed over existing ground.	Project Supervisor Project Manager	Inspect Roadway daily and hourly when large amounts of deliveries are being brought in or out of site.	Clean Roadway where required Clean out and replace rumble strip if filled Resurface carpark and entrance if required.

5. Waste Management	
Potential Impacts:	The main potential impact of the project on waste management is likely to be generation of solid and liquid wastes during the construction phase of the project such as containers, drums, metals, cardboard, and spoilt material.
Management Objective:	To minimise the generation of construction wastes, maximise the recycling of materials and where required, ensure disposal of wastes at approved locations.
Performance Criteria:	Liquid wastes stored/generated on site will be managed in accordance with AS 1940:2017. Recyclable construction materials (i.e. steel) shall be sent to approved recycling facilities. Non-recyclable materials/wastes (including regulated and hazardous wastes) shall be disposed of at licensed landfill sites in line with Aestec and Client Waste Management Plans. During construction, recyclable materials shall be substituted for non-recyclable materials, where practicable. All regulated waste removed from site must be removed by a person who holds a current approval to transport such waste under the provisions of the Environmental Protection Act 1994. A record of all wastes must be kept detailing the following information: • date of pickup of waste; • description of waste; • quantity of waste; • origin of waste; and • destination of the waste **Note:** Traceable wastes as listed in **Schedule 1** of the Environmental Protection (Waste Management) Regulation 2000 are not covered by this condition. Traceable wastes have similar recording requirements to this condition in accordance with a waste tracking system established under the above regulation.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Prepare an emergency plan for accidental spills and implement as required.	Project Supervisor	In consultation with client notify EPA of any instances of material or serious environmental harm. This shall be recorded with all non-compliances reported to the Project Manager.	A review of the Contingency Plan shall be undertaken to ensure appropriate procedures are in place for managing spills. Alternative

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
			measures shall be recommended as appropriate to the nature of the non-compliance.
No waste is to be buried or burnt on-site.	Project Supervisor	Regularly inspect waste collection areas and waste stockpiles to ensure that they comply with the SPS waste management procedures.	Train construction staff on waste disposal requirements emphasising reduce, reuse, and recycle principles.
Site Facilities (Offices, Crib rooms, Amenities) to be cleaned at least once a day.	Project Manager	Regularly inspect site facilities to ensure that they are being cleaned every day. Organise waste removal based on skip bin capacity.	Immediate clean of identified area to take place from the site cleaner. All bins emptied into the site skip bin, floors mopped, surfaces wiped down, fridges cleared out fortnightly. Site skip bins will be cleaned out at 75% capacity.
Amenities emptied at 75% capacity.	Project Supervisor	Inspect waste tank for capacity level weekly, or as required based on current site manning.	Organise Gully truck to attend site for pumping of waste tank within the same week. Ensure that tank is emptied before allowing gully truck to leave site.

6. Hazardous Goods	
Potential Impacts:	Contamination of site with waste fuel, oils, and chemicals; and Contamination of surface or ground waters & damage to aquatic ecosystems by the release of fuel, oils, and chemicals in stormwater runoff from the site.
Management Objective:	To minimise land contamination by appropriate handling and disposal of hazardous goods.
Performance Criteria:	There will be no contamination from chemicals, oils or fuels associated with the construction. All storage and handling of flammable and combustible liquids will be undertaken in accordance with AS 1940:2017. All regulated waste removed from site must be removed by a person who holds a current approval to transport such waste under the provisions of the Environmental Protection Act 1994. Each container of regulated waste must be marked to identify the waste contained therein. A record of all wastes must be kept detailing the following information: • date of pickup of waste; • description of waste; • quantity of waste; • origin of waste; and • destination of the waste. **Note:** Traceable wastes as listed in **Schedule 1** of the Environmental Protection (Waste Management) Regulation 2000 are not covered by this condition. Traceable wastes have similar recording requirements to this condition in accordance with a waste tracking system established under the above regulation.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Containment and cleanup equipment will be kept close to tanks and barrels to minimise spill response time and will include sufficient absorbent to capture the largest foreseeable spill.	Project Supervisor Subcontractors	Project Supervisor will ensure the site is inspected daily for fuel & chemical spillages and leakages or evidence that fuels and chemicals have not been disposed of in the appropriate manner.	A review of the EMP shall be undertaken to ensure appropriate procedures are in place for managing spills. Alternative measures shall be recommended as appropriate to the nature of the non-compliance.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
		If a fuel or chemical spill results in pollution of the environment, the Project Manager shall inform the Client immediately, who may notify DESI if deemed appropriate.	
Waste lubricants and oils are to be contained and taken off site for recycling and/or disposal.	Project Supervisor Subcontractors	Project Supervisors will ensure the site is inspected daily for waste oil and lubricant spillages and leakages or evidence that waste lubricants and oils have not been disposed of in the appropriate manner.	All hazardous chemicals to be stored on-site in accordance with provisions in the Environmental Protection Act 1994
Measures to prevent the discharge of fluids into streams and watercourses will include the following: • bunds and collection vessels; • absorbent materials in quantities to capture the largest foreseeable spill; and • Disposal drums or containers suitable for holding and transporting contaminated materials.	Project Supervisor Subcontractors	Project Supervisors will ensure the site is inspected daily for waste oil and lubricant spillages and leakages or evidence that waste lubricants and oils have not been disposed of in the appropriate manner. If a fuel or chemical spill results in pollution of the environment, the Construction Contractor shall inform the Client immediately, who may notify DESI if deemed appropriate.	All hazardous chemicals to be stored on-site in accordance with provisions in the Environmental Protection Act 1994

7. Weed Management	
Potential Impacts:	Potential to disperse weeds into areas of remnant vegetation where weed species do not currently occur. contamination of surface water & areas through the movement of soil, and attachment of seed (and other propagules) to vehicles and machinery. Reduction of the habitat quality of the site for threatened species.
Management Objective:	Minimise the opportunities for the introduction and expansion of weed species and minimise their ranges and/or abundance within the subject land. Minimise or eliminate the potential impacts of weeds on threatened flora and fauna species.
Performance Criteria:	Assessment of project area and temporary existing access tracks located around the site for noxious weed infestations, with subsequent reviews at two (2) or three (3) monthly intervals depending on the season. Implementation of a management regime based on findings of initial and subsequent weed infestation inspections. Continual monitoring of stockpiles and identified weed infestation sites for weed growth.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Erosion and sediment controls are to be installed during and immediately following construction, to protect bushland and watercourses from infestation by weed seed transported in water or sediment.	Project Supervisor Subcontractors	Project Supervisor / Project Manager will ensure the site erosion and sediment control measures are installed in the appropriate manner.	Repair or install erosion control measures as deemed necessary.
Vehicles and heavy machinery are to be checked before entering construction worksites by the Supervisors, so that weed materials are not transported into worksite areas. If weed materials (seeds, vegetative components etc) are found, the machinery is to be taken to a weed and seed wash bay to dispose of the material.	Project Supervisor Subcontractors	The Supervisor will ensure the vehicles and heavy machinery is inspected prior to allowing on-site. Any evidence of weed contamination will result in the machinery not being allowed on-site, until such time measures have been taken to ensure compliance. Weed and Seed to be completed for all vehicles being brought onto and off of site. All vehicles	Ensure all plant is inspected for cleanliness prior to arriving on-site.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
		that don't pass the weed and seed will be sent to the Aldoga wash facility for cleaning.	

APPENDIX A – WEEKLY ENVIRONMENTAL CHECKLIST

Project:	Caustic Transfer Sump Pump	**Job No:**	PY368H
Inspector:	XXX	**Date:**	XXX
Weather:	XXX	**Area Inspected:**	General Site
Current Activities:	Civil Construction		

	Checklist	Action Required		
	Flora / Fauna / Pest Plants & Animals			
1	Are clearing limits clearly defined / communicated to relevant persons?	☐ **Yes**	☐ **No**	☐ **N/A**
2	Are limits of clearing being minimised and staged in accordance with the EMP?	☐ **Yes**	☐ **No**	☐ **N/A**
3	Is pre-clearing removal of habitat structures (logs, hollows) being completed in accordance with the EMP?	☐ **Yes**	☐ **No**	☐ **N/A**
4	Has a Fauna Spotter inspected / attended all clearing of native vegetation?	☐ **Yes**	☐ **No**	☐ **N/A**
5	Has fauna injury and relocation log been completed?	☐ **Yes**	☐ **No**	☐ **N/A**
6	Are access restrictions to sensitive areas (protected plants, habitat, property) adequate and well maintained?	☐ **Yes**	☐ **No**	☐ **N/A**
7	Fauna has suitable means of escaping trenches, culverts, and other structures where they could become trapped?	☐ **Yes**	☐ **No**	☐ **N/A**
8	Vegetation to be retained and adjacent to the works is in good health?	☐ **Yes**	☐ **No**	☐ **N/A**
9	Are measures to prevent spread of weeds being implemented (access restrictions, eradication, plant wash down, separation of weed infested soil/material)?	☐ **Yes**	☐ **No**	☐ **N/A**
10	Increase in extent/cover (new outbreaks) of weed infestations identified and reported?	☐ **Yes**	☐ **No**	☐ **N/A**
11	New or increased populations of pest animals identified and reported?	☐ **Yes**	☐ **No**	☐ **N/A**
	Plant Hygiene			
12	Plant and equipment that have been off-road or operated in a restricted area have been certified free of weed material and prior to mobilisation/relocation, as applicable?	☐ **Yes**	☐ **No**	☐ **N/A**
13	Are wash down facilities designed and maintained to contain contaminants (weeds, wastewater)?	☐ **Yes**	☐ **No**	☐ **N/A**
14	Random inspection of light vehicles and plant for weed material / compliance with wash-down procedure?	☐ **Yes**	☐ **No**	☐ **N/A**
	Soil & Water			
15	Are clean water diversions installed around major disturbances, where possible?	☐ **Yes**	☐ **No**	☐ **N/A**
16	Are cut-off drains or alternative measures installed to break-down steep slopes and larger catchments?	☐ **Yes**	☐ **No**	☐ **N/A**

	Checklist	Action Required		
17	Are drainage well defined and flow dissipation / check dams installed where necessary?	☐ **Yes**	☐ **No**	☐ **N/A**
18	Are sed. traps (basins, sed. fence, bunds) installed in effective locations (down slope boundaries, discharge pts)?	☐ **Yes**	☐ **No**	☐ **N/A**
19	Are sediment controls installed properly, of adequate scale, and structurally sound with minimum 2/3 capacity?	☐ **Yes**	☐ **No**	☐ **N/A**
20	Are access points stable and haul roads well maintained / roads free of mud?	☐ **Yes**	☐ **No**	☐ **N/A**
21	Are stockpiles within height limits, well profiled, with controls?	☐ **Yes**	☐ **No**	☐ **N/A**
22	Is revegetation (temporary or permanent) and/or maintenance being actioned in a timely manner?	☐ **Yes**	☐ **No**	☐ **N/A**
23	Visual signs of degradation of watercourses (e.g. sedimentation)?	☐ **Yes**	☐ **No**	☐ **N/A**
24	Has WQ monitoring been completed in accordance with EMP (prior to basin discharge and daily during discharge)?	☐ **Yes**	☐ **No**	☐ **N/A**
25	Are activities in watercourses (bed or banks) in accordance with permit conditions / exemption guidelines?	☐ **Yes**	☐ **No**	☐ **N/A**
26	Are minor qualities of fuels, oils, chemicals, and other hazardous materials secure from spillage?	☐ **Yes**	☐ **No**	☐ **N/A**
27	Are bulk fuels, oils, chemicals, and other hazardous materials appropriately bunded (impervious, 110% capacity)?	☐ **Yes**	☐ **No**	☐ **N/A**
28	Is refuelling and other oil/chemical transfer in accordance with EMP (50m from drainage where practicable, containment devices, spill prevention fitted equipment, etc.)?	☐ **Yes**	☐ **No**	☐ **N/A**
29	Is spill (and fire) response equipment of adequate type (hydrocarbon, chemical, floating), number and capacity for the works and readily visible / accessible? Are SDS readily identified / accessible?	☐ **Yes**	☐ **No**	☐ **N/A**
30	Have all spills been remediated appropriately?	☐ **Yes**	☐ **No**	☐ **N/A**
31	Hot works and smoking are restricted to designated areas?	☐ **Yes**	☐ **No**	☐ **N/A**
32	Firefighting equipment (extinguishers, water, pumps) of adequate capacity is located in all vehicles / storage / hot work areas?	☐ **Yes**	☐ **No**	☐ **N/A**
33	Fire prevention measures are in place to protect other potential ignition sources / fuels?	☐ **Yes**	☐ **No**	☐ **N/A**
34	Bushfire response and evacuation procedures are clearly communicated to all personnel?	☐ **Yes**	☐ **No**	☐ **N/A**
	Dust / Noise / Vibration / Nuisance			
35	Dust control measures (e.g. wetting, speed limits) are maintaining dust within acceptable levels?	☐ **Yes**	☐ **No**	☐ **N/A**
36	Noise control measures (e.g. conditioning, restricted hours) are being implemented in sensitive (habitat) areas?	☐ **Yes**	☐ **No**	☐ **N/A**
37	Plant & equipment emissions (i.e. noise, exhaust smoke) present doubt of compliance with relevant criteria?	☐ **Yes**	☐ **No**	☐ **N/A**
38	Vibration (indicators) at sensitive receptors present doubt of compliance with vibration criteria?	☐ **Yes**	☐ **No**	☐ **N/A**
	Waste / Recycling			

	Checklist	Action Required		
39	Waste / recyclables are segregated to maximise recovery of recyclable materials and minimise waste?	☐ **Yes**	☐ **No**	☐ **N/A**
40	Type and size of receptacles sufficient to properly segregated waste / recyclable materials?	☐ **Yes**	☐ **No**	☐ **N/A**
41	Receptacles / storage areas are secure from wildlife, spills & weatherproof as required for various materials?	☐ **Yes**	☐ **No**	☐ **N/A**
42	Licensed operators are / disposing waste / recyclables? Waste tracking records complete?	☐ **Yes**	☐ **No**	☐ **N/A**
	Energy & Water Use			
43	Site is free of water leaks and uncontrolled running water, wastage?	☐ **Yes**	☐ **No**	☐ **N/A**
44	Hoses, taps etc. are fitted with water efficient devices (stop valves, flow restrictors?	☐ **Yes**	☐ **No**	☐ **N/A**
45	Water usage (taking) records are being maintained?	☐ **Yes**	☐ **No**	☐ **N/A**
46	Plant and equipment (including administrative) are being shut down when idle, where practicable?	☐ **Yes**	☐ **No**	☐ **N/A**
	Incidents & Corrective Action			
47	Have all incidents / complaints been reported appropriately (e.g. spills, sedimentation, harm to wildlife)?	☐ **Yes**	☐ **No**	☐ **N/A**
48	Are preventive and corrective actions being actioned in a timely manner?	☐ **Yes**	☐ **No**	☐ **N/A**

No	Actions / Comments / Issues
1.	
2.	
3	
4.	
5.	

DOCUMENT CONTROL

1. Key Information

Title:	AS-PL-009 Environment Management Plan
Prepared By:	IMS Specialist (Paul Zomer)
Approved By:	Construction Manager (Daryl Henderson)
Date Effective From:	16th July 2025
Version Number:	V1.0
Review Frequency:	Every 5 years or in conjunction with policy/procedure updates
Next Review Date:	16th July 2029
Contact(s):	IMS Specialist (Paul Zomer) Construction Manager (Daryl Henderson)

2. Revision History

Version:	Date:	Summary or Changes:	Initials:	Changes Marked:
V1.0	16/07/2025	Document Created.	P.Z.	No

3. Approvals

Name/Title:	Date:	Version:
Operations Manager (Westley Hallam)	16/07/2025	V1.0

4. Distribution

This document has been distributed to:

Name/Title/Team:	Distribution Method:	Date of Issue:	Version:
Project Team	Management Meetings, Project Team Meetings, Site Inductions.	04/07/2024	V1.0

5. Linked Documentation

(documents that have been linked or referenced to in the text of this document)

Document Title:	Document File Path:
AS-PO-003 Environmental Policy Statement	C:\Droplink\5. Aestec Server IMS\2. Document Control\1. Policy Statements
AS-PR-004 Control of Non-Conforming Products Procedure	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Procedures
AS-PR-005 Corrective Action & Improvement Procedure	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Procedures
AS-PR-006 Risk, Aspect & Opportunity Management Procedure	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Procedures
AS-PR-008 Incident Investigation Management & Reporting Procedure	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Procedures
AS-PL-006 Waste Management Plan	C:\Droplink\5. Aestec Server IMS\2. Document Control\3. Plans
AS-PL-008 Health & Safety Management Plan	C:\Droplink\5. Aestec Server IMS\2. Document Control\3. Plans
AS-SF-052 HSE Work Area Inspection	C:\Droplink\5. Aestec Server IMS\2. Document Control\5. Forms\Form - SF

Gladstone Ports Corporation

Growth, prosperity, community.

GPC Document No.2005946: EC: TS
GPC Ref.: DA2025/04/01
Your Ref. Z21326.1

12 August 2025

RTA Yarwun Pty Ltd
c/- Zone Planning Group
PO Box 5332
GLADSTONE QLD 4680

Dear Sarah,

DECISION NOTICE – APPROVAL WITH CONDITIONS – DA2025/04/01

(GIVEN UNDER SECTION 63 *PLANNING ACT 2016* AND THE PROVISIONS OF GPC LAND USE PLAN 2012V2)

1. Application Details

This development application was **properly made** to the Gladstone Ports Corporation Limited on 23 May 2025.

Application Number:	DA2025/04/01
Applicant Name:	RTA Yarwun Pty Ltd
Applicant Contact Details:	c/- Zone Planning Group Att: Sarah Hunt PO Box 5332 GLADSTONE QLD 4680 Email: Sarah@ZonePlanning.com.au
Approvals Sought (Land Use Plan):	Port Application for Operational Works – undertaking work in, on, over, or under premises that materially affects premises or their use – Sump Pump Installation and Ancillary Works
Approval Sought (Port Overlay):	Not Applicable
Details of Proposed Development:	Port Application for Sump Pump Installation and Ancillary Works
Street Address:	Serrant Road, Yarwun
Real Property Description:	Lot 502 SP252988 and Lot 503 SP144788
Land Owner:	Gladstone Ports Corporation Limited
Land Use Plan Precinct:	Port Industry and Commerce
Port Overlay Precinct:	Port Industry Precinct

2. Details of Proposed Development

Port Application for sump pump Installation and ancillary works.

3. Details of Decision

This development application is **approved in full with conditions**. These conditions are set out in Attachment 1 and are clearly identified to indicate whether the Assessment manager or a concurrence agency imposed them.

4. Details of Approval

This development approval is a **Development Permit** given for:

(a) Port Application for undertaking work in, on, over, or under premises or their use – Sump Pump Installation and ancillary works.

5. Conditions

This development approval is subject to the conditions in Attachment 1 - Part 1 and Part 2.

6. Further Development Permits

Please be advised that the following development permits are required to be obtained before the development can be carried out:

(a) Not applicable

7. Approved Plans and Specifications

Copies of the following plans are approved and enclosed in Attachment 2:

Drawing/report title	Prepared by	Date	Reference No.	Version
Traffic Management Plan	Aestec Services	16/07/2025	AS-PL-012	1
Erosion & Sediment & Stormwater Control Plan	Aestec Services	06/08/2025 Amended	AS-PL-014	1
Acid Sulphate Soil Management Plan	Aestec Services	06/08/2025 Amended	AS-PL-011	1
Environmental Management Plan	Aestec Services	16/07/2025	AS-PL-009	1
Raw Caustic Receival and Storage Pump Station Security Fence Site Plan	Rio Tinto	24/06/2025	180C(2D)10106	E01
Raw Caustic Receival and Storage Concrete Bund Area Upgrade General Arrangement	Rio Tinto	22/01/2025	180D(2D)10108	C01

Drawing/report title	Prepared by	Date	Reference No.	Version
Raw Caustic Receival and Storage Concrete Bund Area Upgrade Sump Layout and Sections	Rio Tinto	22/01/2025	180D(2D)10109	C01
Raw Caustic Receival and Storage Concrete Bund Area Sump 2 Details	Rio Tinto	22/01/2025	180D(2D)10110	C01
Raw Caustic Receival and Storage Concrete Bund Area Typical Joint Details	Rio Tinto	22/01/2025	180D(2D)10111	C01
Raw Caustic Receival and Storage Concrete Bund Area Steelwork Details	Rio Tinto	22/01/2025	180S(S)10116	C01
Raw Caustic Receival and Storage Secondary Sump Pump 180PUI10955 Schematic Diagram	Rio Tinto	24/02/2025	P01-180E(2D)10116	C01
Raw Caustic Receival and Storage Secondary Sump Pump 180PUI10955 Interconnection Diagram	Rio Tinto	24/02/2025	P01-180E(2D)10116	C01
Caustic Handling 180L10955 Sec. Sump Pump Level Instrument Loop Diagram	Rio Tinto	04/03/2025	P01-180L10955_LS	C01
Raw Caustic Storage 415V Distribution MCC 180MC10110 Single Line Diagram	Rio Tinto	24/02/2025	P03-180E(2D)10013	C01
Raw Caustic Receival and Storage 415 Distribution MCC 180MC10110 General Arrangement Sheet 1	Rio Tinto	24/02/2025	P03-180E(2D)10032	C01
Raw Caustic Receival and Storage 415 Distribution MCC 180MC10110 General Arrangement Sheet 2	Rio Tinto	24/02/2025	P03-180E(2D)10033	C01
Raw Caustic Control 24DC Control Power MCC 180M10110 Circuit Schedule	Rio Tinto	24/02/2025	P04-180ESD0004	C01
Raw Caustic Received and Storage GEO Tank 1 Cable Block Diagram	Rio Tinto	24/02/2025	P05-180E(2D)10012	C01
Raw Caustic Receival and Storage Raw Caustic Storage Area Instrument Location Plan	Rio Tinto	04/03/2025	P05-180I(2D)10001	C01
Caustic Handling Pipeline – 180CA10019E2 Piping Isometric	Rio Tinto	03/02/2025	180CA10019-A	C01
Caustic Handling Pipeline – 180CA100192E2 Piping Isometric	Rio Tinto	03/02/2025	180CA10019-B	C01
Caustic Handling Pipeline – 180CA100192E2 Piping Isometric	Rio Tinto	03/02/2025	180CA10019-C	C01
Caustic Handling Pipeline – 180CA100192E2 Piping Isometric	Rio Tinto	03/02/2025	180CA10019-D	C01
Caustic Handling New Caustic Sump Pump and Piping New Pump Plinth Details	Rio Tinto	03/02/2025	180D(2D)10112	C01

Drawing/report title	Prepared by	Date	Reference No.	Version
Caustic Handling New Caustic Sump Pump and Piping General Arrangement	Rio Tinto	03/02/2025	180P(2D)10069	C01
Caustic Handling New Caustic Sump Pump and Piping Spool Details	Rio Tinto	03/02/2025	180P(2D)10070	C01
Caustic Handling New Caustic Sump Pump and Piping Scale Trap 180PS10955 & Support Details	Rio Tinto	03/02/2025	180P(2D)10071	C01
Raw Caustic Storage Sheet 1 of 1 Progress Flow Diagram	Rio Tinto	03/02/2025	P02-180Z(2D)20021	C01
Raw Caustic Storage Bladder 1 Caustic Suction & Leak Detection System Piping and Instrument Diagram	Rio Tinto	03/02/2025	P03-180Z(2D)10106	C01
Raw Caustic Storage Receival Storage Piping and Instrument Diagram	Rio Tinto	03/02/2025	P06-180Z(2D)10102	C01

8. Currency Period for the Approval

Pursuant to section 85 of the Planning Act, this development approval will lapse at the end of the periods set out below:

(a) For Port Application this approval lapses 6 years after this approval decision date.

9. Rights of Appeal

No legislated appeal rights are afforded with this decision notice as the application was not made under the provisions of the *Planning Act 2016*.

For further information please contact Trudi Smith, Planning Specialist, on 07 4976 1314 or via email planning@gpcl.com.au .

Yours sincerely,

Jenelle Druce
Acting Chief Executive Officer

Enc. Attachment 1: Conditions of Approval
Part 1 – Conditions imposed by the assessment manager

Attachment 2: Approved plans and specifications

Attachment 3: Waiver Appeal Rights

Attachment 1 Conditions of Approval

PART 1: ASSESSMENT MANAGER CONDITIONS

In general the development proposal is in compliance with the requirements of Gladstone Ports Corporation Limited (GPC). This development approval is subject to each the following conditions which are stated by GPC, the Assessment Manager.

Part 1a: Approval sought under Land Use Plan – Port Application

CONDITIONS
GENERAL
1. Development must be carried out generally in accordance with the Approved plans and supporting management plans, except where modified by conditions of this permit.
2. Unless otherwise stated, all conditions must be complied with and completed prior to the commencement of the development.
3. Where additional "approval" is required under these conditions by the Assessment Manager (GPC) for drawings or documentation the proponent must submit for review, amend to the satisfaction of, and obtain written approval from the Assessment Manager. Furthermore, the Assessment Manager will require no less than 20 business days, unless otherwise conditioned by the Assessment Manager, to initially assess the drawings or documentation provided prior to the commencement of the works. Should further information be required for assessment, the Assessment Manager will require a further 5 business days to complete the information request assessment and response.
4. The Applicant must at its cost and expense, keep and maintain the development footprint, including existing services, in a state that is satisfactory to the Assessment Manager.
ENGINEERING AND PLANNING
5. Upon completion of the works, the Applicant must supply the Assessment Manager with RPEQ certified "As Constructed" plans in both PDF and electronic (CAD format) which illustrate all infrastructure and services installed on, under or over Port land associated with the activity.
6. Upon completion of works, the Applicant must certify that the development is constructed as per design and that the development has been constructed generally in accordance with the Approved plans.
7. Any site lighting used during construction channels must illuminate a landward glare beyond the site boundary. Lighting must be reviewed during construction and use of the development with respect to navigation. Where an issue is identified or a validated complaint received, the Applicant must immediately rectify to the satisfaction of the Assessment Manager
8. Prior to completion of works, the Applicant must reinstate the security fencing in accordance with the Raw Caustic Receival and Storage Pump Station Security Fence Site Plan with transparent fencing. The security fencing must be provided to a minimum of 1.8m in height. Unless otherwise approved by the Assessment Manager, the fencing is to be black PVC plastic coated, chain wire mesh fence and black posts.
9. The Applicant must maintain the property frontage in a clean and tidy manner, mow any grassed areas and maintain any stormwater drains within the lease area regularly.

INFRASTRUCTURE
10. The applicant must notify the Assessment Manager (GPC) of damage caused to any port infrastructure or services e.g. roads, water mains etc. as a result of the works. The applicant may undertake the repairs directly in consultation with the Assessment Manager however, depending upon the nature and location of the damage, the Assessment Manager retains the right to undertake the repairs at the expense of the Applicant.
WASTE MANAGEMENT
11. At all times, maintain and operate an adequate waste disposal service, including the maintenance of refuse bins and associated storage areas so as not to cause an environmental nuisance.
12. Any spillage of sediment, wastes, fuels, chemicals, contaminants, or other materials at the storage site, on port roads or on the wharf must be cleaned immediately. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such materials to any stormwater drainage system, roadside gutters or waters.
CONSTRUCTION MANAGEMENT
13. The Applicant is required to apply for and obtain from GPC a Permit to Dig/Excavate prior to commencing works by contacting, GPC's Port Infrastructure Asset Manager, including for any landscaping, services or infrastructure outside of the lease area.
14. In the event a construction compound is required on port land outside the project lease area for offices, laydown areas, employee car parking or stockpiling areas etc., the Applicant or their contractor must obtain a Consent to Enter from the Assessment Manager's Property Specialist via 07 4976 1334 or property@gpcl.com.au prior to works commencing.
15. The construction compound, including offices, laydown areas and employee car parking, is to be contained within the nominated area unless otherwise approved in writing by the Assessment Manager.
16. No mud, dirt or other debris is to be tracked onto public roads during construction and operation of development.
17. Any construction fill material must be uncontaminated and reused from onsite or sourced from a licensed quarry.
ENVIRONMENT
Operational Environmental Management Plan 18. At least 10 days prior to the commencement of the use, an Environmental Management Plan (EMP) is to be submitted to the Assessment Manager (GPC) for approval, specific to the development that ensures: a. environmental risks are identified, managed and continually assessed; and b. that staff are trained, aware and competency assessed of their obligations under the EMP, including a copy of the management plan and development approval available on site at all times; and c. that reviews of environmental performance are undertaken at least annually; and d. any amendments to the EMP are to be submitted to the Assessment Manager for review and approval; and

e. any rehabilitation and decommissioning works where required. Once approved by the Assessment Manager, the approved development must be carried out in accordance with this EMP. *Note: the Assessment Manager has a guideline for the development of environmental management plans that may be utilised in meeting the requirements of this condition.*
19. Any amendments to the Environmental Management Plan (EMP) are to be submitted to GPC for review and approval. Amendments must ensure: a. environmental risks are identified, managed and continually assessed; and b. that staff are trained and aware of their obligations under the EMP; and c. that reviews of environmental performance are undertaken at least annually.
20. The premises is located on part of a lot that is registered on the Queensland Environmental Management Register. Therefore, disposal of any excavated material off site must be in accordance with relevant legislation or alternately retained on site.
INCIDENT NOTIFICATION
21. At all times, Gladstone Ports Corporation Environment Hotline (07) 4976 1617 is to be notified of the occurrence of any: a. release / spill of contaminants (e.g. fuels / chemicals / sewerage) greater than 20L to land; b. release / spill of contaminants (e.g. fuels / chemicals / sewerage) of any amount to water; c. any environmental complaints received by the holder of this approval; and d. non-compliance with environment related conditions of this approval, or any other environmental approval obtained in relation to the approved activity.
22. Environmental incident notification must be included in any Environmental Management Plans for the premises.

ADVICE NOTES

a. In relation to works proposed on tidal structures (not forming part of this development approval), the Applicant is required to comply with the requirements for excluded tidal works in the Excluded Works (Coastal) Guideline.

b. The subject site has the potential for inundation from medium and high storm tide events. Any future development and/or upgrades of this site should give consideration to managing these potential impacts as part of any application material.

c. Where a Permit to Dig/Excavate prior to commencing excavation or digging for the development, the Applicant or their contractor is required to apply for and obtain the permit by contacting the Port Infrastructure Asset Manager on 4976 1332 or bartono@gpcl.com.au.

d. Where a construction compound or laydown area is required, the proponent or their contractor is required to apply for and obtain a Consent to Enter from the Assessment Manager's Property Specialist via 07 4976 1334 or property@gpcl.com.au prior to works commencing.

e. The *Environmental Protection Act* 1994 states that a person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm. Environmental harm includes environmental nuisance. In this regard persons and entities, involved in the civil, earthworks, construction, and operational phases of this development, are to adhere to their 'general environmental duty' to minimise the risk of causing environmental harm.

f. All development should proceed in accordance with the duty of care guidelines under the *Aboriginal Cultural Heritage Act 2003*. Penalties may apply where duty of care under that Act has been breached.

g. Where the Applicant is required to submit further documentation to the Assessment Manager, this is to be directed to the Planning section at planning@gpcl.com.au, including reference to the allocated development application number and condition.

h. Where communication with GPC Port Security is required e.g. for schedules or service requests, direct communication to the following: pfso@gpcl.com.au, contracted_security@gpcl.com.au and gpcsupervisor@diamondprotection.com.

Attachment 2 Approved Plans and Specifications

AESTEC SERVICES

BUILDING * PLUMBING * CIVIL

AS-PL-012

TRAFFIC MANAGEMENT PLAN

Version: 1.0

PY368H – Caustic Transfer Station Sump Pump

RTY Yarwun

INTRODUCTION

1. General Overview

Aestec Services is committed to safety as a way of doing business and its performance in safety is used as a performance indicator in measuring its success as a business.

Construction Management Works shall comply with the requirements of Rio Tinto Yarwun Traffic Management Plan and Procedures as provided by the Principal.

The intention of this document is to identify and mitigates risks associated with the following topics:

- Site establishment;
- Construction team;
- Mobilisation;
- Construction methodology;
- Disruption to neighbouring properties;
- Public safety, amenity, and site security;
- Project Employee parking;
- Noise Management;
- Waste Management;
- Air and Dust Management and;
- Traffic Management.

2. Scope

This document describes the Traffic Management Plan (TMP) to be used to risks associated with vehicle movement are identified, managed and controlled. Work undertaken by Aestec will follow a consistent workflow/processes as described within this document. Deviations from these processes can only occur:

- Under specific instructions/direction of our client(s); and
- With written authorisation from RTY Yarwun representative Project Scope.

3. Definitions

Term / Acronym	Definition
FSP	Fundamentally Stable Parking When a vehicle is parked, it cannot move in an unplanned or uncontrolled fashion, even if the vehicle is out of gear and the park brake should fail to engage. A vehicle is considered fundamentally stable when: • The vehicle is in neutral, or the clutch pedal is depressed and • The handbrake is disengaged and • The vehicle does not roll If the vehicle rolls, two-wheel chocks are required to provide FSP.
HME	Heavy Machinery Equipment which includes, but is not limited to: Bulldozers, graders, loaders, backhoes, scrapers, compactors, tractors, excavators, ADT (Articulated Dump Trucks)
LV	Light vehicles. Any vehicle that weighs less than 4.5 tonnes.

MV	Medium Vehicles which include: Rigid water carts, service trucks, medium and heavy rigid trucks, franna cranes, Excavator <20T capacity
Positive communication	Positive communication is the acknowledgement and confirmation that the communication has been received and understood by both parties. Example: "LV25 wish to enter bund Circuit from the pond" response "This is HV14, LV25 proceed with caution"

4. Scope of Work

This scope details the Works included to safely supply, fabricate, assemble, install and test the new caustic transfer station sump pump with all associated piping and steelwork inclusive of all quality assurance tasks.

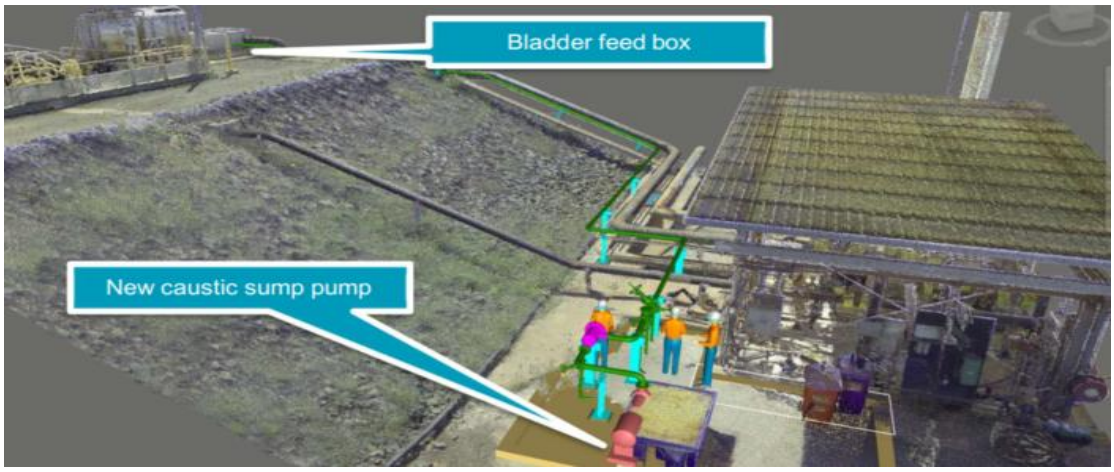
Refer to 180GSW8004 Rio Tinto Yarwun Projects Caustic Transfer Station Sump Pump.

4.1. Site Location

The scope of works will be carried out at the caustic sump located at Area 180 as depicted below.

4.2. Battery Limits

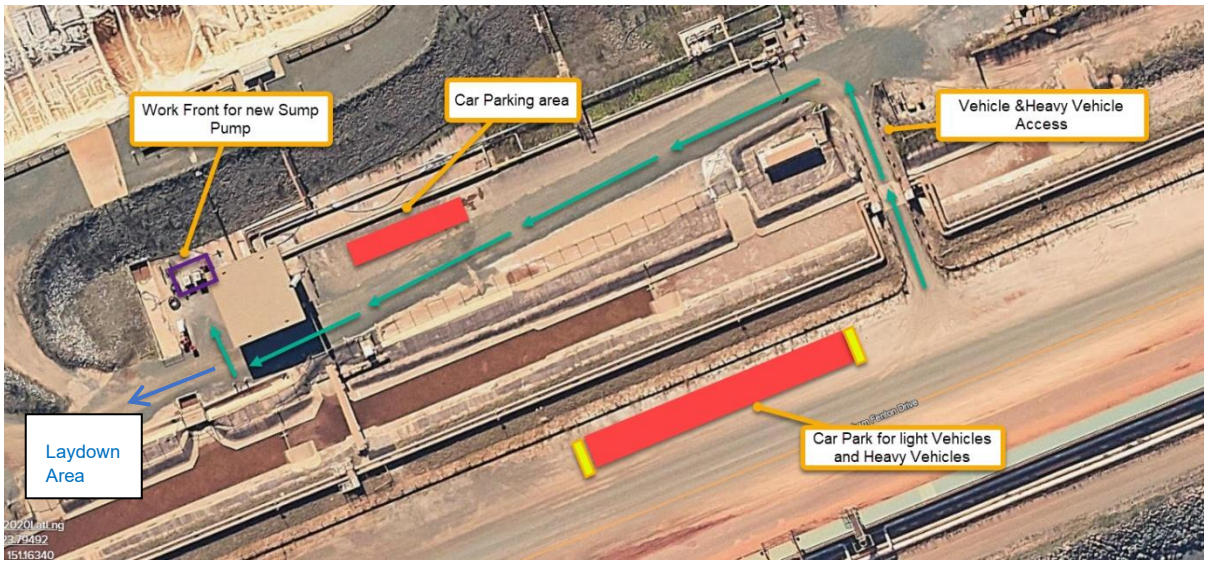
The battery limits and for the Works are detailed on P&IDs P03-180Z(2D)10106 and P06-180Z(2D)10102. There is only 1 tie-in point for this project which is TI-180-026 on the bladder feed box.



5. Rio Tinto Yarwun Traffic Management Plan

Aestec will comply with the requirements outlined within 180CGR8002 Caustic Transfer Station Upgrade Traffic Management Plan.

Fisherman's Landing Road is the primary access route for vehicles entering the RIO TINTO wharf facility. Other land users also use the roadway to service and manage their facilities, some other business access also must be taken into when servicing the ships alongside the wharf i.e. taxi and delivery drivers. Signage will be placed prior to any impact on the vehicle access in and out of the Riotinto caustic storage Yard.



The following requirements are to be complied with for the Project, and in contractors' Traffic Management Plans:

- Driving shall occur on the left-hand side of the road;
- Queensland road rules shall apply unless specifically stated otherwise herein;
- All vehicles shall follow all instructions given by a traffic controller or spotter;
- All vehicles shall maintain a 50m clearance from heavy vehicles;
- All vehicles shall maintain a safe distance from all other vehicles. A safe distance shall be determined by the prevailing environmental, road, traffic and operating conditions.

6. Driver Authorisation

All operators of mobile plant, including light vehicles, shall as a minimum:

- Hold a Full Open License within any Australian state or territory (applicable to the class of vehicle being operated)
- Hold a high-risk work license (HRWL) where applicable or Certificate of Competency for the mobile plant they are operating issued by a Registered Training Organisation (RTO)
- Completed and passed a Verification of Competency (VOC) within the last 2 years (model-specific for mobile plant); and
- Be authorised to operate/drive.

7. Registration of Project Vehicles

All vehicles parking in the material handling project carpark will be required to provide registration details to the project team. This information will be shared with Yarwun Site Security and relevant GPC authorities on request to ensure security of the area can be monitored and maintained.

8. Parking

Parking at the project site will be in accordance with Yarwun policy. A designated parking area will be established for the project with the capacity for 10 vehicles. Overflow parking is designated outside the fisherman's landing security gate.

The carpark will be reverse parking. All light vehicles are to be reverse parked in the designated parking area in an orderly and fundamentally stable manner.

Water barriers will be used to designate the confines of the carpark. These barriers will also be used as traffic management aids, to direct vehicles to a safe access path if required.

9. Heavy Vehicle Parking

Heavy equipment including trucks must be reversed parked in the designed go line area in an orderly and fundamentally stable manner.

10. Entering Fishermans Landing Security Zone

All persons working on the project must swipe on at the GPS fisherman's landing security gate. A current GPC fisherman's landing induction will be required, and the swipe card will be issued at Yarwun site control and will need to be returned when leaving the project.

All traffic must follow the signposted speed limits and traffic signs when entering and leaving the project site. Heavy equipment including trucks must be reversed parked in the designed go line area in an orderly and fundamentally stable manner.

11. Pedestrian Access

Pedestrian access will be provided along the back of the carpark, Access over the main bridge to allow safe access over the main bridge personal will need to communicate with any vehicles or traffic controller to allow access over the bridge. Full RIO TINTO site compliant PPE will be required to be worm when exiting vehicle or when inside a vehicle with the windows down.

12. Site Induction

The traffic management plan will be communicated to all project workers during kick off of the Project.

13. Personnel Entry to Site

All personnel are required to comply with the RioTinto Yarwun site PPE requirements when entering the site and these requirements will commence as soon as the person exists a vehicle. When entering site persons engaged in the works will be required to sign on to the appropriate Project paperwork at the start of the shift and sign off again at the end of the shift or leaving the site during shift hours. Visitors to site will must be escorted at all times when inside the project boundaries or have completed the site induction/formalisation process.

13.1. Exclusion and Segregation

Pedestrian exclusion zones shall be identified, signposted, and communicated to personnel. Pedestrian crossings shall comply with the following requirements:

- Be used in areas with high levels of pedestrian traffic;
- Be signed posted to clearly identify where pedestrians must cross roadways;
- Have signage on roadways prior to the crossing, to alert approaching drivers and operators;
- Be sign posted with 'give way" on the left-hand side of the road where the crossing begins to alert the drivers and operators;
- Pedestrians must use footpaths and designated road crossing locations;
- Pedestrians shall give way to all vehicles at any designated pedestrian crossing.
- Have separate traffic routes for pedestrians and vehicles so that vehicles cannot physically enter pedestrian space;
- Be provided with appropriate protection from vehicular traffic where possible with entry barriers to pathways, including signage, bollards, and deflection handrails, may be erected to discourage vehicles from accessing those pathways; and

- Falling object protection devices, barriers and signage shall be installed where pedestrians are required to pass under any infrastructure from which an object could fall.

13.2. Exclusion and Segregation

Elimination is the preferred control where SME and personnel interface. Where this is not achievable, the risk control strategies shall consider, but not be limited to:

- The time of day such work will be performed;
- The use of physical barriers, lights, and signage;
- Radio communications;
- Training in the hazards of working near mobile equipment and supervision of personnel;
- Site notices and other communications; and
- Traffic Controllers and Spotters.

13.3. Barricading and Separation

Where the potential exists for interface between SME, road bearing equipment and personnel, access to work areas must be controlled through the use of:

- Barricading;
- Signage in accordance with the requirements of this Plan; and
- Communications in accordance with requirements of this Plan.

This shall be achieved by:

- Signage erected at entrance points demarcating area ownership and relevant information for the provision of a safe working environment including:
- Emergency management processes and contacts
- Primary contact details of the person in control of the work area
- Work area specific Major Hazards and Critical Control management
- Work area specific communication channels and methodology
- Work area specific risk management;
- Ensuring all perimeter access points are clearly sign posted as restricted areas and controlled to prevent inadvertent access of unauthorised persons; and

Erection of direction signs along the access road and entry points to ensure the location of major infrastructure is easily identifiable.

14. Truck Movements

Prior to any heavy equipment entering the security zone the occupants must be both Rio Tinto inducted and hold the appropriate GPC fisherman's landing access card and Rio Tinto area inductions.

Trucks are to be parked overnight in the designated carparks and all prestart checks are to be completed on the line before commencing work. Rio Tinto Yarwun compliant PPE is to be warm while conducting prestart checks and while operating equipment.

Truck access to the site will be via the front gate and if required access gate on the Northern boundary of the caustic yard. Due to the restricted nature of the area inside the caustic yard it is envisaged that the trucks will need to travel in one direction pending on the size of the Truck.

15. Mobile Equipment

Any additional mobile equipment that will be required during the project may be retained inside the caustic yard boundary if removing it from the area causes additional hazards and if there is sufficient room available to store the equipment in a safe manner.

16. Materials Transported to Site

All truck loads being transported to the RMA or other areas on site must be accompanied by a spotter. The spotter must be utilised when the truck is in a restricted to tight location and when the truck is being reversed. The spotter and driver must be sufficiently inducted and familiar with the specific area of the site prior to commencing the delivery.

17. Towing

No vehicle will tow equipment unless it is engineered to do so. Towing equipment must be tagged and identified so that it is not used for lifting. All towing equipment will be stored correctly in the Aestec Storage container and will be clearly tagged identifying so that it is not used for lifting purposes.

When towing trailers, personnel must be assessed as competent and be authorised to undertake towing operations.

When towing trailers, personnel must:

- A personal risk assessment completed prior to commencement;
- All trailers and trailer hitch must be compliant with the Australian Design Rules;
- Towing vehicles must be of sufficient size to control the tow and comply with the rated Aggregated Trailer Mass;
- The towing hitch must be inspected prior to attaching;
- Safety chains must be installed and properly utilised;
- Where pintle hitches are used that do not incorporate a self-locking mechanism, the pintle hitch safety pin must be properly utilised;
- Low range 4WD should be engaged when towing equipment in wet or slippery conditions;
- Trailers shall be safely immobilised prior to disconnection from the towing vehicle, achieved using stabilising jacks (if fitted), parking brakes or wheel chocks;
- Consideration to hazards related to shifting loads during travel.

In the event of a bogging, contact the Company Rep or Project Supervisor, raise an incident, and develop a rescue plan detailing what we intent on using for the recovery and what controls are in place in the event of a strap failing during the recovery. Some examples of this would be to ensure that all plant and equipment used during the recovery are fitted with armour glass in windows.

18. Maintenance

All mobile equipment must be placed on a planned maintenance program. Records of maintenance complete on mobile equipment will be available if requested. All maintenance schedules must be followed as required.

19. Equipment Breakdown

In the event of a breakdown, whenever possible the equipment operator shall park the vehicle out of the way of other traffic. The operator of the vehicle shall only leave the vehicle if it has been made fundamentally stable.

In addition:

- All broken down equipment shall be left with parking and hazard lights turned on.
- Orange traffic delineators (or flashing amber lights at night) shall be placed 50m to the front and rear of the vehicle to warn other vehicle drivers of the hazard.
- If required, a traffic controller may be used to direct traffic around the broken-down equipment where a visibility hazard exists.

20. Road Rules

17.1. Speed Limits

While traveling in the Fisherman's landing exclusion zone that is not covered by the project boundaries the sign posted speed limits apply. While moving equipment around the demarcated project area a 20km/h speed limit will apply.

17.2. Seat Belts

All vehicles and mobile equipment must be fitted with seat belts, and all drivers and passengers will wear seat belts when driving or operating the vehicle no matter the case.

17.3. Public Roadways

All haulage and transport equipment and Heavy Equipment must comply with Queensland Road legislation when travelling on a public roadway including but not limited to, speed limits, give way rules, overtaking and load and capacity regulations. All site access will be via the south.

17.4. Overtaking

No vehicle is permitted to overtake on site.

17.5. Give Way

The following rules apply to determine who has the right of way:

- A light vehicle shall give way to another light vehicle in accordance with Queensland Road Rules.
- A light vehicle shall always give way to any piece of HME/ MV regardless of the situation.
- A person shall give way to all vehicles and mobile equipment.

17.6. Distance between Vehicles

A driver must maintain a sufficient distance behind another vehicle whilst travelling so that the driver can, if necessary; stop safely to avoid a collision with the vehicle. Aestec operate a 50m / 20m / 10m process to manage interactions between SME and other plant.

All vehicles must maintain a minimum of 50 metres clearances while travelling behind surface mobile equipment.

At 50 metres of the Surface Mobile Equipment (SME):

- The approaching vehicle operator must make positive verbal communication with the SME operator and receive authority to enter.

At 20 metres of the Surface Mobile Equipment (SME):

- The SME must stop activity and ground engaging tools (GET) must be grounded or JHA completed (except where physical separation is present).

At 10 metres of the Surface Mobile Equipment (SME):

- The Ground Engaging Tools (GET) must be grounded, and the SME Operator must be out of the cab.

Less than 10 meters of an Operating SME a team-based risk assessment (TBRA) is required. Controls must include:

- The workers must have continuous positive verbal communication with the SME Operator.

17.7. Mobile Phones

Mobile phones are not to be used while driving any vehicle on site.

21. Vehicle Pre-Operational Inspections

A Vehicle Pre-Operation Check shall be conducted on all vehicles, as a minimum, at the start of each shift where the vehicle will be in use.

Any non-conforming prestart shall be reported to supervision immediately and tagged out of service if determined necessary by the Project Manager.

REFERENCES

- Queensland Road Rules
- Transport Operations (Road Use Management – Vehicle Standards and Safety) Regulation 2010.

DOCUMENT CONTROL

1. Key Information

Title:	AS-PL-012 Traffic Management Plan
Prepared By:	IMS Specialist (Paul Zomer)
Approved By:	Construction Manager (Daryl Henderson)
Date Effective From:	16th July 2025
Version Number:	1.0
Review Frequency:	Every 5 years or in conjunction with policy/procedure updates
Next Review Date:	16th July 2029
Contact(s):	IMS Specialist (Paul Zomer) Construction Manager (Daryl Henderson)

2. Revision History

Version:	Date:	Summary or Changes:	Initials:	Changes Marked:
V1.0	16/07/2025	Document Created	P.Z.	No

3. Approvals

Name/Title:	Date:	Version:
Construction Manager (Daryl Henderson)	16/07/2025	V 1.0

4. Distribution

This document has been distributed to:

Name/Title/Team:	Distribution Method:	Date of Issue:	Version:
Project Team	Management Meetings, Project Team Meetings, Site Inductions.	10/07/2024	V 1.0

5. Linked Documentation

(documents that have been linked or referenced to in the text of this document)

Document Title:	Document File Path:
AS-PL-008 Health and Safety Management Plan	
AS-PL-009 Environmental Management Plan	
AS-PL-010 Emergency Response Plan	
AS-PL-012 Traffic Management Plan	
AS-SOP-038 Safe Operating Procedure (Mobile Devices)	

AS-HR-023 Mobile Device Authorisation form	

AESTEC SERVICES

BUILDING * PLUMBING * CIVIL

AS-PL-014

EROSION & SEDIMENT & STORM WATER CONTROL PLAN

Version: 1.0

Caustic Transfer Sump Pump

1. INTRODUCTION

1. General Overview

Aestec Services (Aestec) is committed to sustainable development throughout operations which covers all areas of the organisation. Continual improvement in environmental performance will be achieved by setting objectives, measuring progress, and communicating results.

To deliver on Aestec's Erosion and Sediment Control Plan & Storm Water, Aestec will:

- Communicate Aestec's Environmental Policy and Procedures to all employees;
- Comply with all applicable environmental laws, regulations, statutory obligations, and relevant voluntary codes of practice;
- Make business decisions that work towards achieving sustainable development;
- Ensure that our employees, subcontractors, suppliers, and consultants are aware of and have the necessary skills to fulfil their environmental obligations with respect to operations;
- Strive to conserve resources, reduce waste, and eliminate or minimise adverse environmental effects and risks that may be associated with our services and operations;
- Collaborate with our clients and other stakeholders to help them achieve their environmental objectives and obligations;
- Periodically review and revise our Environmental Policy and Procedures to maintain their relevance.

We will respond to the environmental challenges in all areas of our business, and it is the responsibility of every employee to implement this plan.

1.1. Scope

This document describes the Erosion and Sediment Control Plan (ESCP) to be used to ensure impact to the environment is managed and controlled. This document will be reviewed and accepted by an Engineer prior to distribution and implementation. Work undertaken by Aestec will follow a consistent workflow / process as described within this document. Deviations from these processes can only occur:

- Under specific instructions/direction of our client(s); and
- With written authorisation from Rio Tinto Leadership; and
- The Engineer.

1.2. Legislation & Relevant Guidelines

This document is based on the following:

- AS/NZS ISO 14001, Environmental management systems - Specification with guidance for use; and
- Soil Erosion and Sediment Control, Engineering Guidelines for Queensland Construction Sites, published by the Queensland Division of the Institution of Engineers Australia.
- Environmental Protection Act 1994 (EP Act) - key elements to assess environmental impacts.
- Environmental Protection Regulation 2019 - the project's relevant impacts are assessed under the regulation.
- Environmental Protection (Waste Management) Regulation 2000
- Environmental Protection (Air) Policy 2019
- Environmental Protection (Noise) Policy 2019
- Environmental Protection (Water and Wetland Biodiversity) Policy 2019

1.3. Definitions

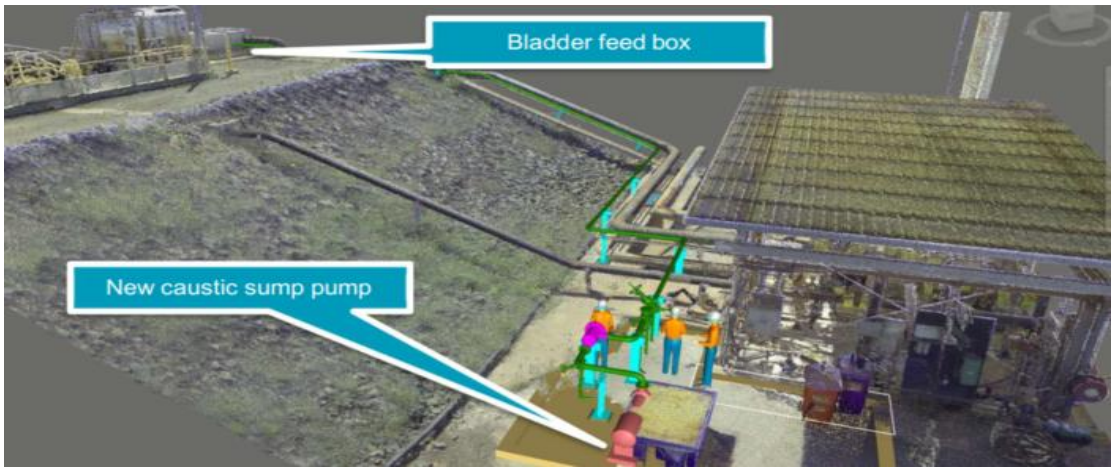
Term / Acronym	Definition
DESI	Department of Environment, Science, and Innovation.
Environment	Includes: a) ecosystems and their constituent parts, including people and communities; and b) all natural and physical resources; and c) the qualities and characteristics of locations, places, and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony, and sense of community; and d) The social, economic, aesthetic, and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).
Environmental Harm	Is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration, or frequency) on an environmental value, and includes environmental nuisance. May be caused by an activity: a) whether the harm is a direct or indirect result of the activity; or b) Whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.
Environmental Impact	Any change to the environment, whether adverse or beneficial or partially resulting from an organisation's activities, products, or services.
Environmental Nuisance	Is unreasonable interference or likely interference with an environmental value caused by: a) noise, dust, odour, light; or b) an unhealthy, offensive, or unsightly condition because of contamination; or c) Another way prescribed by legislation.
Environmental Value	Is: a) a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or b) Another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.
Rio Tinto	Rio Tinto Alcan Yarwun
Serious Environmental Harm	Is environmental harm (other than environmental nuisance): a) that causes actual or potential harm to environmental values that is irreversible, of a high impact or widespread; or b) that causes actual or potential harm to environmental values of an area of high conservation value or special significance; or c) that causes actual or potential loss or damage to property of an amount of, or amounts totalling, more than the threshold amount; or d) that results in costs of more than the threshold amount being incurred in taking appropriate action to: • prevent or minimise the harm; and

	• Rehabilitate or restore the environment to its condition before the harm.
The Company / Aestec	Aestec Services Pty Ltd
Waste	Includes anything that is: a) left over, or an unwanted by-product, from an industrial, commercial, domestic, or other activity; or b) Surplus to the industrial, commercial, domestic, or other activity generating the waste.

1.4. Scope of Work

The project focuses on maintaining the existing soil gradients, infrastructure and control stormwater for the duration of the Caustic Transfer Sump Pump Project. The project entails the excavation to install the sump pits for the Caustic Transfer Pump. The excavated material is deemed contaminated soil and is loaded directly into a truck during the excavation process eliminate and mitigate caustic exposure. The project will have open excavations for a short period of time which will have erosion and sedimentation controls including the diversion of storm water from work area.

1.4.1. Site Location



1.5. Roles and Responsibilities

1.5.1. General

All site personnel are responsible for conducting the works in accordance with the procedures and such that any potential impacts on the environment are eliminated or minimised.

1.5.2. Project Manager

The Project Manager is responsible for:

- The establishment, maintenance, and approval of this Erosion and Sediment Control Plan in accordance with the requirements of the contract;
- Provision of adequate and suitable resources;
- Ensuring that all Project employees have a clear understanding of the environmental requirements relevant to their area of work and their responsibilities within their areas of work;
- Chairing site meetings and ensuring environmental issues are included in the meeting agenda; and
- Ensuring that environmental reporting requirements are implemented.

1.5.3. HSE Specialist / HSE Advisor

The HSE Specialist / HSE Advisors are responsible for:

- Providing all necessary training including induction of all project personnel into project environmental matters;
- Reviewing construction methods to check that adequate environmental management measures are incorporated into the planning of particular construction processes; and
- Acting upon reports/observations of potential or existing environmental hazards as recorded in the monthly reports.

1.5.4. Project Supervisor

The Project Supervisor (both Company and Subcontractor) is responsible for:

- Ensuring that all construction activities are conducted in accordance with the specified sediment controls;
- Undertaking and reporting on the implementation and effectiveness of the specified sediment controls;
- Implementing corrective action to rectify sediment incidents and non-conformances identified on inspection reports in accordance with procedures, and
- Ensuring that no work commences prior to the submission of appropriate permits.

1.5.5. Leading Hand

Leading Hands (both Company and Subcontractor) is responsible for:

- Identifying and reporting any existing or potential adverse erosion and sediment impacts on site;
- Ensuring the work under their control is conducted in accordance with environmentally sound work practices; and
- Providing suitable leadership to labour and subcontractors with regard to erosion and sediment issues.

1.5.6. Employees

Employees (and subcontract employees) are responsible for:

- Complying with acceptable safe erosion and sediment practices; and
- Identifying and reporting any existing/potential adverse erosion and sediment impacts on site.

2. SURFACE & STORM WATER MANAGEMENT PLAN

2.1. Objective

The Management Plan has been developed to address environmental risks associated with the construction at the of the Caustic Transfer Sump Pump. The plan focuses on the implementation of best-practice storm water and sediment and erosion controls in line with DESI guidelines to minimise runoff, protect sensitive waterways, and ensure compliance with environmental regulations. Specific strategies include sediment barriers, water control, and regular inspections to mitigate impacts during all construction phases.

2.2. Sediment Control Measures

2.2.1. Silt Fences and Sediment Control Barriers

Sediment control barriers, including silt fences, will be strategically installed around excavation zones, stockpile areas, and along drainage pathways to prevent sediment-laden water from entering sensitive waterways. Weekly walks and monthly inspections will ensure structural integrity.

Fences will also be checked after heavy rainfall events, and any sagging, displacement, or sediment accumulation exceeding 50% of capacity will be rectified immediately. Barriers will be placed at downstream boundaries and flow exit points to intercept sediment runoff.

2.2.2. Spoil Stockpile Management

Spoil material generated during excavation will be carefully managed to mitigate requirements for erosion control and runoff due to storm water. Sediment fences or coir logs will areas to contain potential sediment runoff or redirect storm water flow.

2.2.3. Stabilisation of Exposed Surfaces

To minimise erosion risks, exposed soil surfaces will be stabilised promptly using best-practice methods. Erosion control blankets, mulch, or hydroseeding will be applied to exposed areas following excavation or backfilling. Sediment traps, inlet protection devices, and geotextile filters will be installed at drains to capture sediment before it enters the stormwater system. Where applicable, temporary diversion drains will be established to redirect surface runoff away from exposed work zones.

2.3. Storm Water and Wastewater Management

For stormwater will be managed in line with DESI and project-specific methodologies to prevent contamination of nearby waterways or other areas around project. Drilling fluids and slurry generated during excavation works will be captured in work area. Stormwater will be redirect where applicable away from work area. Wastewater and sediment will be collected and removed by Aestec Vacuum Trucks and transported to approved disposal facilities in compliance with regulatory standards.

To ensure the continued effectiveness of sediment control measures, a comprehensive inspection and maintenance schedule will be implemented. Monthly inspections will assess all sediment control measures, including silt fences, sediment traps, spoil containment, and water management systems. Key aspects of inspections will include checking for structural damage, sediment buildup, and breaches in containment systems. Repairs or replacements will be carried out promptly to prevent further runoff.

2.4.1. Post-Weather Event Inspections

Following significant rainfall events, immediate inspections will be conducted to assess:

- Condition and capacity of silt fences and sediment barriers.
- Erosion of exposed surfaces and any sediment discharge.
- Structural integrity of wastewater containment systems.
- Reinforcements or additional control measures will be implemented as necessary to mitigate risks.

2.4.2. Compliance and Reporting

Compliance with DESI environmental standards will be maintained through detailed monitoring, record-keeping, and reporting. All inspections and corrective actions will be documented. Records of sediment and water disposal will be maintained for auditing and regulatory purposes. Any sediment discharge events will be reported immediately to project managers and relevant regulatory authorities, with corrective actions undertaken.

3. Construction Phase Practices

Pollutant	Potential Source	Management/Maintenance Procedure	Proposed Treatment Device and Maintenance Procedure
Sediment and Eroded material	Excavated material, fill material, exposed ground	Provision of sediment and silt barriers to the site drainage entry and exit points	Coir Logs to be placed at all inlets to decrease sediment pass through into the sediment basin. Removal of excess sand/silt build-up at regular intervals and after every storm. Place to divert storm water where applicable
Dust	exposed ground	Covering the material or wetting it down at regular intervals	Coverage of material with plastic, geotextile, surface binding agents or regular watering
Litter	Refuse generated by staff	Construction waste is to be cleaned off the site area and disposed of into an industrial bin then removed by a refuse collection contractor	Industrial bin is to be provided within the construction area - to be emptied on weekly basis
Concrete	Washing of concrete trucks/tools to remove wet/unused concrete	Provision of a closed area onsite for washing off concrete slurries	Liquids to be removed by a waste collection contractor. Solids to be placed into a refuse bin
Surfactants (detergents)	Washing down operations on hardstand area using detergent	No cleaning of vehicles will be permitted on site	Monitoring and prevention
Chemical (Paints, thinners, etc.)	Typically, this may occur due to spillage of product	Where spills occur, the containment area is to stop escape. The material is to be treated (as required) and removed and cleaned by a licensed contractor. Minor spillage outside this area shall be cleaned up with cloths and disposed of to waste via the refuse bin.	A temporary containment area. This is to be impermeable and of a size to permit mixing/transfer, and with a storage volume of twice the largest container used. Treatment of spills is to occur on site. No discharge of treated water to the stormwater is to occur without council approval.
Storm & Waste water	Rain and wastewater from excavation as is close to tidal/water table level.	Storm water to be redirected and diverted to redirect away from excavation and work area.	Sediment fencing coir logs, sand bags.

4. DOCUMENT CONTROL

4.1. Key Information

Title:	AS-PL-014 Erosion & Sediment & Stormwater Control Plan
Prepared By:	IMS Specialist (Paul Zomer)
Approved By:	Project Manager (Tom Perkins)
Date Effective From:	25/06/25
Version Number:	V1.0
Review Frequency:	Every 5 years or in conjunction with policy/procedure updates
Next Review Date:	
Contact(s):	Project Manager (Tom Perkins), Document Controller (Paul Zomer)

4.2. Revision History

Version:	Date:	Summary or Changes:	Initials:	Changes Marked:
V1.0		Document Created and Approved by RPEQ.		No

4.3. Approvals

Name/Title:	Date:	Version:
Project Manager (Tom, Perkins)		V1.0

4.4. Distribution

This document has been distributed to:

Name/Title/Team:	Distribution Method:	Date of Issue:	Version:
Project Team	Management Meetings, Project Team Meetings, Site Inductions.		V1.0
Tom Perkins		25/06/25	
Shannon Christie		25/06/25	

4.5. Linked Documentation

(documents that have been linked or referenced to in the text of this document)

Document Title:	Document File Path:

AESTEC SERVICES

BUILDING * PLUMBING * CIVIL

AS-PL-011

ACID SULPHATE SOIL MANAGEMENT PLAN

Version: 1.0

1. DOCUMENT APPROVAL

1.1. Document Controller

Name:	Paul Zomer	**Position:**	IMS Specialist
Signature:		**Date:**	_____/_____/_____

1.2. Document Owner

Name:	Daryl Henderson	**Position:**	Construction Manager
Signature:		**Date:**	_____/_____/_____

2. INTRODUCTION

2.1. General Overview

Aestec Services (Aestec) is committed to sustainable development throughout operations which covers all areas of the organisation. Continual improvement in environmental performance will be achieved by setting objectives, measuring progress, and communicating results.

To deliver on Aestec's Environment sustainable management & development, Aestec will:

- Communicate Aestec's Environmental Policy and Procedures to all employees;
- Comply with all applicable environmental laws, regulations, statutory obligations, and relevant voluntary codes of practice;
- Make business decisions that work towards achieving sustainable development;
- Ensure that our employees, subcontractors, suppliers, and consultants are aware of and have the necessary skills to fulfil their environmental obligations with respect to operations;
- Strive to conserve resources, reduce waste, and eliminate or minimise adverse environmental effects and risks that may be associated with our services and operations;
- Collaborate with our clients and other stakeholders to help them achieve their environmental objectives and obligations;
- Periodically review and revise our Environmental Policy and Procedures to maintain their relevance.

We will respond to the environmental challenges in all areas of our business, and it is the responsibility of every employee to implement this plan.

2.2. Purpose

The purpose of this plan is to outline the procedures and control measures required to identify, manage, and mitigate the potential environmental and health risks associated with the disturbance of acid sulphate soils during construction or ground-disturbing activities.

This plan provides a framework to ensure that any actual or potential acid sulphate soils are appropriately assessed, handled, treated, and monitored in accordance with environmental legislation, regulatory guidelines, and industry best practices. The document is critical in preventing the generation and release of acid and associated contaminants, which can have harmful impacts on water quality, infrastructure, ecosystems, and human health.

2.3. Scope

This document describes the Acid Sulphate Soil Management Plan (ASSMP) to be used to ensure impact to the environment is managed and controlled. Work undertaken by Aestec will follow a consistent workflow/processes as described within this document. Deviations from these processes can only occur:

- Under specific instructions/direction of our client(s); and
- With written authorisation from RTY Yarwun representative.

The plan applies when land is disturbed below the 20 m Australian Height Datum (AHD) relief level of the land where pyritic soils (marine muds) exist and where there is potential for release of sulphide oxidation products, including the formation of acidic and/or saline soils and wastes, the release of low pH water or water with a neutral pH but elevated sulphate-dominated salinity or metals concentrations.

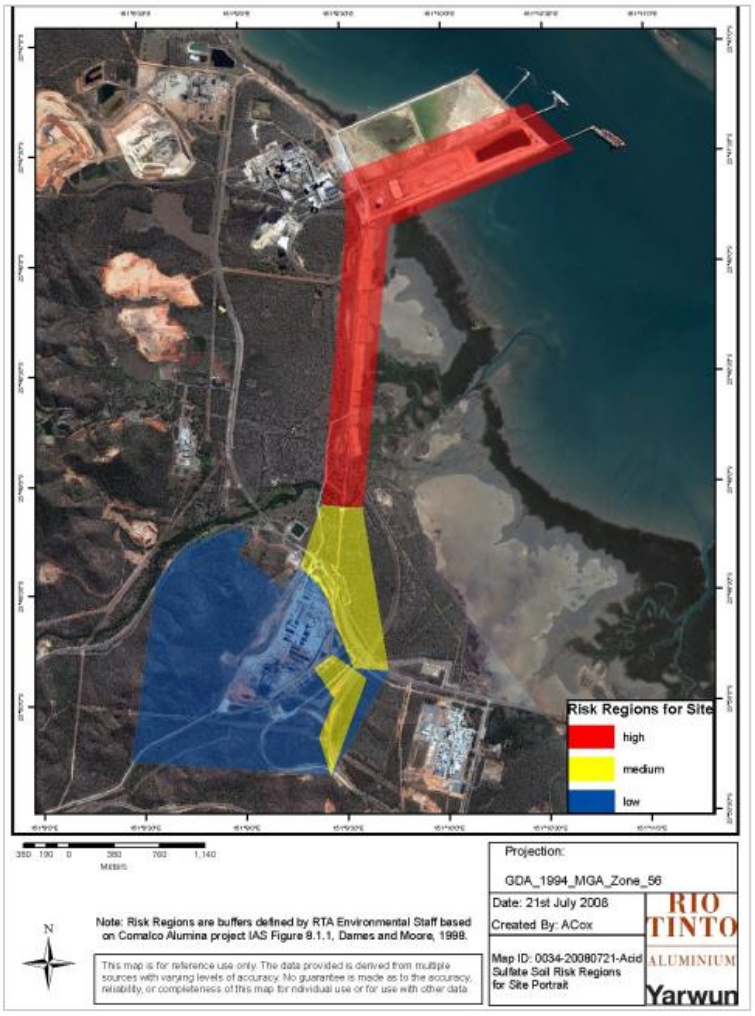


Figure 1 - Risk Regions on Site

3. DEFINITIONS & ACRONYMS

Acronym:	Term / Expression:	Definition:
-	Company / Aestec	AESTEC Pty Ltd
AHD	Australian Height Datum	AHD is the standard reference level for elevation (height) across Australia.
ASS	Acid Sulphate Soils	Acid sulphate soils (ASS) are natural sediments or soils containing iron sulphides, primarily pyrite, that can produce sulfuric acid when exposed to oxygen.
-	Acid Sulphate Soils Management Plan	Acid Sulphate Soils Management Plan describe how an action might impact on the natural environment in which it occurs and set out clear commitments from the person taking the action on how those impacts will be avoided, minimised, and managed so that they are environmentally acceptable.
DEHP	Department of Environment & Heritage Protection	-
DERM	Department of Environment and Resource Management	The Department of Environment and Resource Management (DERM) was formed on 26 March 2009 by merging the former Department of Natural Resources and Water and the former Environmental Protection Agency.
DESI	Department of Environment, Science, and Innovation.	-
-	Environment	Includes: a) ecosystems and their constituent parts, including people and communities; and

		b) all natural and physical resources; and c) the qualities and characteristics of locations, places, and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony, and sense of community; and d) The social, economic, aesthetic, and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).
-	Environmental Harm	Is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration, or frequency) on an environmental value, and includes environmental nuisance. May be caused by an activity: a) whether the harm is a direct or indirect result of the activity; or Whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.
-	Environmental Impact	Any change to the environment, whether adverse or beneficial or partially resulting from an organisation's activities, products, or services.
-	Environmental Nuisance	Is unreasonable interference or likely interference with an environmental value caused by: a) noise, dust, odour, light; or b) an unhealthy, offensive, or unsightly condition because of contamination; or c) Another way prescribed by legislation.
-	Environmental Value	Is: a) a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or b) Another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.
PASS	Potential Acid Sulphate Soils	Potential acid sulphate soils (PASS) are soils containing iron sulphides (like pyrite) that have the potential to produce sulfuric acid when exposed to air through drainage, excavation, or other disturbances.
PH	-	pH is a scale used to measure how acidic or basic (alkaline) a substance is, ranging from 0 (very acidic) to 14 (very alkaline), with 7 being neutral.
RMA	Residue Management Area	-
-	Serious Environmental Harm	Is environmental harm (other than environmental nuisance): a) that causes actual or potential harm to environmental values that is irreversible, of a high impact or widespread; or b) that causes actual or potential harm to environmental values of an area of high conservation value or special significance; or c) that causes actual or potential loss or damage to property of an amount of, or amounts totalling, more than the threshold amount; or d) that results in costs of more than the threshold amount being incurred in taking appropriate action to: • prevent or minimise the harm; and • Rehabilitate or restore the environment to its condition before the harm.
-	Waste	Includes anything that is: a) left over, or an unwanted by-product, from an industrial, commercial, domestic, or other activity; or

b) Surplus to the industrial, commercial, domestic, or other activity generating the waste.

Table 1 - Document Acronyms

4. LEGISLATIVE REQUIREMENTS

4.1. References and Related Documents

- Ahern C, Ahern M and Powell B.(1998), Guidelines for Sampling and Analysis of Lowland Acid Sulphate Soils (ASS) in Queensland, Department of Natural Resources and Mines, Indooroopilly, Queensland.
- Dear SE, Moore NG, Dobos SK, Watling KM and Ahern CR (2002). Soil Management Guidelines. In Queensland Acid Sulphate Soil Technical Manual. Department of Natural Resources and Mines, Indooroopilly, Queensland, Australia.
- Groundwork (2009). Rio Tinto Yarwun Residue Management Area (RMA), refinery and Caustic Bladder Hydrology Study. Queensland, Australia. www.groundwork.com.au.
- Queensland Department of Local Government & Planning (2002), State Planning Policy 2/02 – Planning and Managing Development Involving Acid Sulphate Soils.
- Queensland Department of Local Government & Planning (2002), State Planning Policy 2/02 Guidelines – Acid Sulphate Soils.
- Queensland Acid Sulphate Soil Investigation Team (QASSIT) (2004), Acid Sulphate Soils Laboratory Methods Guidelines Version 2.1
- Ross DJ, 2004, Acid Sulphate Soils Tannum Sands – Gladstone Area Central Queensland Coast, Department of Natural Resources and Mines Queensland.

Title:	Relevant Section(s):
AS/NZS ISO 14001 – Environmental Management Systems	**Section 6.1.2 – Environmental Aspects** • Identify environmental aspects and impacts associated with ASS disturbance. **Section 8.1 – Operational Planning and Control** • Implement procedures to manage and mitigate risks of acid generation, leachate, and contaminated runoff from ASS.
Soil Erosion and Sediment Control – Engineering Guidelines for Queensland Construction Sites	**Chapter 4 – Site Planning and Design** • Identify and map potential acid sulphate soils prior to disturbance. **Chapter 6 – Erosion Control Measures** • Install erosion and sediment controls to prevent mobilisation of acidic or metal-rich runoff from disturbed soils.
Environmental Protection Act 1994 (EP Act)	**Section 319 – General Environmental Duty** • Obligation to prevent or minimise environmental harm from disturbing ASS. **Section 320 – Duty to Notify Environmental Harm** • Requirement to notify the administering authority if ASS disturbance results in notifiable environmental harm. **Section 437 – Causing Serious or Material Environmental Harm** • Uncontrolled acid discharge may be a prosecutable offence under this section.
Environmental Protection Regulation 2019	**Schedule 1 – Environmentally Relevant Activities (ERAs)** • Activities disturbing ASS may trigger ERA thresholds requiring approval. **Part 3 – Environmental Impact Triggers** • Assessment of potential ASS disturbance impacts is required as part of an environmental authority application.

Environmental Protection (Waste Management) Regulation 2000	**Section 18 – Waste Classification** • Acid sulphate soils that require neutralisation or containment are classified as regulated waste. **Schedule 7 – Regulated Waste List** • Management, transport, and disposal of ASS as waste must comply with regulated waste controls.
Environmental Protection (Noise) Policy 2019	**Section 8 – Management of Noise Emissions** • Activities involving excavation and neutralisation of ASS must minimise noise impacts to surrounding areas.
Environmental Protection (Water and Wetland Biodiversity) Policy 2019	**Section 10 – Water Quality Objectives** • Prevent release of acidified runoff or leachate into waterways or wetlands from disturbed ASS. **Section 12 – Environmental Values of Aquatic Ecosystems** • Maintain the ecological health of nearby waterbodies by mitigating acid drainage and metal release from ASS.

Table 2 - Related Legislation

5. ACCOUNTABILITIES & RESPONSIBILITIES

Position:	Accountabilities / Responsibilities
All Site Personnel	• Follow all procedures to minimise or eliminate environmental impacts from ASS. • Ensure personal actions support environmentally responsible management of ASS.
Project Manager	• Establish, approve, and maintain the Acid Sulphate Soil Management Plan (ASSMP) as required by the contract. • Provide sufficient resources to support ASS management. • Ensure all project personnel understand their responsibilities relating to ASS. • Review HSEQ inspection reports and resolve ASS-related incidents or non-conformances. • Include ASS issues in site meetings and meeting agendas. • Ensure all ASS reporting requirements are implemented.
HSEQ Specialist / HSE Advisor	• Deliver training and induction sessions covering ASS issues for all personnel. • Review construction methods to verify incorporation of ASS controls. • Act on reports and observations of ASS risks or hazards identified in monthly reports.
Project Supervisor (Company and Subcontractor)	• Ensure all site activities comply with the ASSMP requirements. • Oversee all minor earthworks or stockpiling below 20m AHD on RTA Yarwun land in line with the ASSMP. • Monitor and report on the implementation and effectiveness of ASS controls. • Conduct Monthly HSE Inspection Reports (AS-SF-052). • Implement corrective actions for ASS-related incidents and non-conformances. • Confirm all relevant permits are submitted before work commences.
Leading Hand (Company and Subcontractor)	• Identify and report existing or potential ASS impacts. • Ensure work practices are environmentally sound and consistent with ASS requirements. • Provide leadership to labour and subcontractors on ASS-related issues.

Employees (Including Subcontractor Employees)	• Follow safe practices related to ASS management. • Identify and report any existing or potential adverse ASS impacts on site.

Table 3 - Responsibilities & Accountabilities

6. TRAINING & COMPETENCY

6.1. Site Inductions

All personnel employed on the project participate in Site Inductions. The environmental section of which shall:

- Introduce the:
  - Aestec's Acid Sulphate Soil Management Plan (ASSMP);
  - Reasons for the Policy – Acid Sulphate Soil duty of care and/or obligations;
  - Projects environmental awareness aspects:
- Review in detail those elements of the Acid Sulphate Soil Management Plan (ASSMP) which relate to the work to be conducted by the person or persons being inducted and their responsibilities under the Acid Sulphate Soil Management Plan (ASSMP); and
- Review procedures to be followed in the event of an emergency and report any incidents or accidents.

Aestec's environmental induction will form part of the site inductions in addition to client induction requirements. The client will be given the opportunity to review and comment on the induction content prior to delivery.

6.2. Communication

Communication of all relevant environmental issues, such as new procedures, products or identified environmental hazards shall be passed on to employees and sub-contractors during:

- Pre-start Meetings;
- Toolbox Meetings;
- Client Meetings: and
- Management Meetings.

All meetings shall encourage feedback from the attendees and shall seek to overcome any communication difficulties between all parties, e.g. (Technical interfaces, different work crews). A record shall be kept of the topics discussed at the Pre-start and Toolbox Meetings, and minutes shall be taken during all Client and Management Meetings.

Signage indicating environmental issues/requirements shall be clearly visible, kept in good repair, and promptly removed when no longer required.

6.3. Complaints

Aestec manages all Project Complaints through Aestec's Control of Non-Conforming Products Procedure, pursuant to which:

- All complaints regarding environmental performance will be referred to the PM;
- The following details relating to any environmental complaints will be recorded:
  - date of complaint,
  - name, address, and telephone number of complainant,
  - nature of complaint, (written description),
  - response action taken and date;
- Environmental incidents raised by regulatory authorities and incidents that could potentially lead to legal action will be reported immediately to the PM;

- Complaints will be actioned without delay and a written response forwarded to the complainant within 14 days of the complaint being received. In the event that a complaint cannot be resolved within the 14-day period, a further response will be forwarded to the complainant immediately resolution is achieved; and
- Action in response to any complaint/s of alleged property damage arising from the project will be initiated within 24 hours of the complaint/s being received, and such action will include cessation of the project related activity alleged to have caused the damage pending resolution of the complaint/s through negotiated agreement with the complainant/s or, if agreement cannot be negotiated, through arbitration.

6.4. Corrective & Preventative Actions

Project Personnel must notify the Project Supervisor and IMS Specialist of all environmental incidents so that immediate action can be undertaken. Environmental incidents will be investigated to prevent a repeat of the event and will include the following:

- Identifying the extent of the incident;
- Identifying and implementing the necessary corrective actions;
- Identifying the personnel responsible for conducting the corrective action;
- Identifying who was responsible for the incident so that additional training can be offered;
- Implementing or modifying controls necessary to avoid a repeat occurrence of the incident
- Documenting incident (including photos' if necessary); and
- Conducting follow up inspection of location where incident occurred and if necessary, implementation of monitoring program (e.g. water quality testing if incident was in waterway).

All Corrective and Preventative actions are undertaking in accordance with Aestec's Corrective Action & Improvement Procedure. Implementation of this EMP will assist in the prevention of environmental incidents.

The Project Manager should daily monitor weather forecasts to determine if storm events are likely.

It is the Project Manager's responsibility to distribute the information to the wider project team. This will enable the project team to ensure control measures are able to minimise the impacts of the storm.

6.5. Management Review

6.5.1. Weekly Reviews

The effectiveness and proper implementation of this Acid Sulphate Soil Management Plan (ASSMP) will be reviewed weekly. Items to be reviewed include:

- Environmental performance on current and completed work.
- Investigation into incidents, complaints, and non-conformance.
- Changes to construction activities and control documents.
- The results of the weekly environmental report.
- Follow up on outstanding corrective actions.

Weekly reviews shall be documented. The Project Manager shall review these reports. Where necessary, an Action Plan shall be developed to address each of the environmental issues identified on site (air emissions, noise, hazardous materials, waste disposal, housekeeping, spillage is etc.).

Actions to be taken are delegated and remain "live" at subsequent meetings until the issue is satisfactorily closed out.

6.5.2. Monthly Reports

The Project Manager shall ensure the timely production of the Project Monthly Report which shall contain a section on environmental issues.

6.5.3. Management Review

The Project Manager shall conduct a review with the HSE Advisor every month by examination of the environmental statistics for that month. Other Project reviews shall take place as a result of environmental audits. Any identified or documented improvements to the safety system shall be considered and, if suitable, implemented. Other sources of information for improvement shall be from suggestions from employees, employees, the Client, or the public.

A review of the Acid Sulphate Soil Management Plan (ASSMP) shall be undertaken following scheduled audits, by the Project Manager, Project Supervisors and HSE Advisor. This review shall include, but not be limited to:

- An evaluation of the suitability of the Acid Sulphate Soil Management Plan (ASSMP);
- A review of performance as measured by the performance indicators;
- An evaluation of the continuing effectiveness of the Project Environmental Management Plan in the light of:
  - changing legislation;
  - changing Client expectations;
  - changes in activities;
  - changes in the Project Organisational structure;
  - advances in science and technology;
  - reviews of incidents and injuries;
  - reporting and communication; and
  - Employee feedback.

Suggested improvements shall be discussed with the Project Manager for input and approval of any corrective or preventive action to improve Project environmental management and the Acid Sulphate Soil Management Plan (ASSMP).

7. ACID SULPHATE SOILS

Acid Sulphate Spoils (ASS) are soils containing iron sulphides (commonly pyrite) which has the potential to produce sulphuric acid if they are disturbed or excavated. Acid sulphate soils occur naturally over extensive low-lying coastal areas, predominantly below 5 metres AHD. The presence of ASS may not be obvious on the soil surface as they are often buried beneath layers of more recently deposited soils and sediment.

Exposed/ disturbed ASS can:

- Have significant adverse effects on the ecology of wetlands and shallow freshwater and brackish aquifer systems by degrading water quality, habitat, and dependent ecosystems;
- Have significant adverse consequences upon commercial and recreation fisheries and crop productivity;
- Corrode concrete and steel infrastructure, such as culverts, pipes and bridges, reducing their functional lifespan. An example of the severity of ASS was the sudden collapse of a bridge in the Northern Territory due to corrosion of the concrete pylons.; and
- Lead to toxic concentrations of acid and metal contaminants which can cause dermatitis, while dust from disturbed acid sulphate soils may cause eye irritation.

7.1. Environmental Licences, Permits, and Approvals

No Licences, Permits or approvals other than authorisation from RTY Yarwun are required under this project as the relevant processes have already been implemented by RTY Yarwun.

8. MINIMUM REQUIREMENTS

8.1. Identification of Potential Acid Sulphate Soils

The potential effects of disturbing ASS (PASS) are to be addressed by contract supervisors during the investigation process as a part of the project planning process. The requirements of this plan apply to all proposed development that will disturb, remove, build upon, excavate or work land, soil and sediment at RTA Yarwun below 20 m AHD

Excavating/disturbing soils or placing fill or any structure (roads, buildings and heavy infrastructure) on land below 5 m AHD shall be deemed to be acid sulphate soil. Areas where projects may trigger this Plan are provided below.

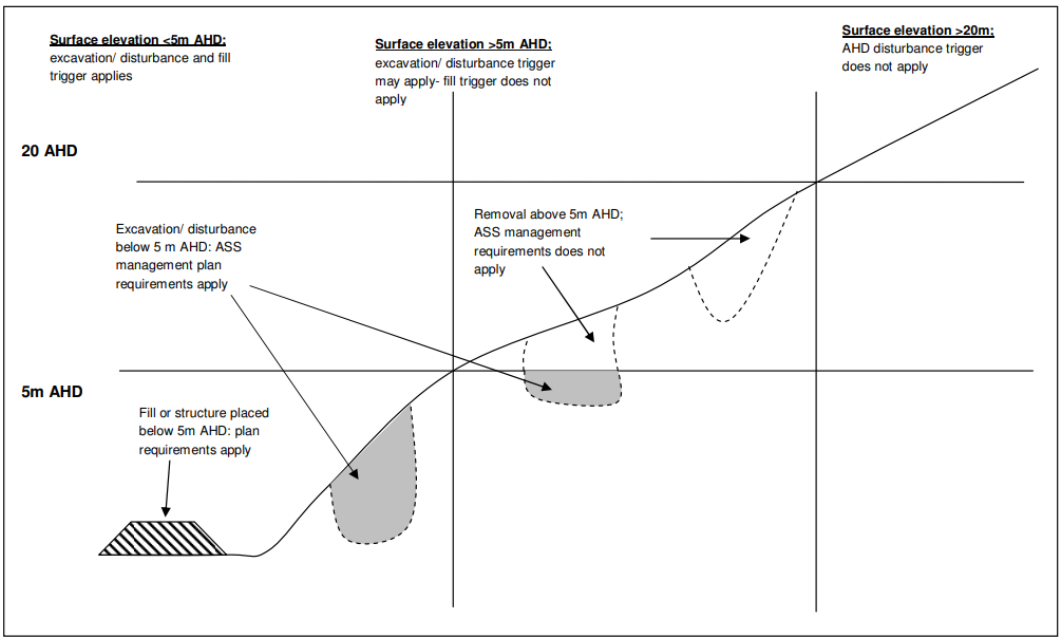


Figure 2 - Surface Elevation <5m ADH

If there is PASS the soil sampling shall occur Guidelines for Sampling and Analysis of Lowland Acid Sulphate Soils in Queensland (Ahern et al 1998) shall be used, or alternatively, the soil may be deemed ASS depending upon the risk to the environment, risk to the project schedule and advice from the Specialist Environment.

8.2. Management and Treatment of Acid Sulphate Soils

If ASS or PASS is confirmed:

- A job-specific ASS risk assessment (Rio Tinto level 2 Risk Assessment Form) shall be completed. As a minimum, the risk assessment shall include the requirements set out in Appendix A.
- The ASS risk assessment shall include determine the risks associated with both on- and off-site impacts. The risk assessment shall be used to determine the appropriate treatment and management options for the soil/mud. Options for the treatment and management of ASS shall be undertaken in accordance with the Queensland Acid Sulphate Soil Technical Manual (Dear et al 2002) available from the Specialist Environment.
- The risk assessment shall be approved by the RTA Yarwun Environment Specialist before conducting any work within an area that has be identified as having ASS or PASS. This will ensure that the management and treatment options employed are sufficient and that all legislative obligations have been satisfied.

8.3. Storage of Acid Sulphate Soils

Stockpiling is not the preferred option for ASS and is therefore only to be undertaken as a short-term activity and with the approval of the Specialist Environment and Area Owner where the stockpile is located. ASS and ARD potential material may only be temporarily stockpiled for durations in accordance with below.

Type of Material		**Duration of stockpiling**	
Texture range (McDonald *et al.* 1990)	Approx clay content (%)	Days	Hours
Coarse texture Sands to loamy sands	≤5	Overnight	18 hours
Medium texture Sandy loams to light clays	5–40	2½ days	70 hours
Fine texture Medium to heavy clays and silty clays	≥40	5 days	140 hours

Figure 3 - Stockpiling Durations

The total volume of material that is placed in short-term stockpiles should not exceed 20% of a day's total extraction.

Examples of when stockpiling may be approved include;

- Stockpiling small quantities over a weekend before reburial;
- Stockpiling due to inclement weather;
- Delays in receiving laboratory results; or
- Delays in neutralising/treatment.

9. DISPOSAL OF ASS/ARD AT THE RMA

Disposal is the least preferred option for mineral waste according to the hierarchy of controls. However acid waste into the caustic solids is an approved method of disposal if well planned and executed.

Disposal of ASS or ARD may occur at the RMA if all other treatment avenues have been evaluated and assessed. Reasons for disposing of ASS or ARD at the RMA include:

- Extensive cost associated with treatment;
- The residual environmental risk from available treatment/ management options is too high i.e. to protect sensitive receptors; and
- Unrealistic requirement for ongoing maintenance and monitoring.

A disposal plan is to be prepared prior to disposal and approved by the Superintendent RMA on the excavation permit form and linked to the risk assessment so the Specialist Environment is aware of the risks to the environment.

The disposal plan shall be approved by both the Specialist Environment and the Superintendent RMA with reference to:

- Health and safety of our employees, the community and public;
- Trucking schedule (include number of trucks, number of trips and total duration of disposal operations);
- Traffic impacts and management;
- Dust potential and management; and
- Disposal location and methodology (in conjunctions with the requirements of this plan and in consultation with RMA superintendent)

A disposal plan template is provided in Appendix B. A copy of the disposal plan is to be provided to the permit issuer. A copy is also to be presented to the RMA Superintendent and Community Relations Specialist at least 5 business days before disposal operations.

The RMA Superintendent is responsible for designating a suitable disposal area. The preferred option is to blend the acidic earth to gain some beneficial neutralising potential. The least preferred option is to dump the ASS in a dry area away from the mud farm where it will need to be actively managed until neutralised or buried.

Quantities and locations of ASS at the RMA shall be recorded and included in mineral waste reports to the Manager Environment each month. Acid sulphate soil disposal shall be audited as part of the waste management plan audit. RMA team member will also be visually assessing the mineral waste dumps, as will the annual dam safety engineers. Groundwater bores are monitored quarterly for contamination.

10. APPROVALS

An excavation permit shall be obtained from the Engineering Team, citing approval from the Specialist Environment, prior to disturbing the ground below the 20 m AHD mark. This plan is triggered during the permit approval process. The initial ASS/PASS determination shall be approved by the Specialist Environment and the ASS/RMA Disposal Form (Appendix B) is to be completed prior to the disposal of ARD and ASS at the RMA.

11. SCOPE OF WORK

This scope details the Works included to safely supply, fabricate, assemble, install and test the new caustic transfer station sump pump with all associated piping and steelwork inclusive of all quality assurance tasks.

Refer to 180GSW8004 Rio Tinto Yarwun Projects Caustic Transfer Station Sump Pump.

11.1. Site Location

The scope of works will be carried out at the caustic sump located at Area 180 as depicted below.

Figure 4 - Caustic Sump Location

11.2. Battery Limits

The battery limits and for the Works are detailed on P&IDs P03-180Z(2D)10106 and P06-180Z(2D)10102. There is only 1 tie-in point for this project which is TI-180-026 on the bladder feed box.

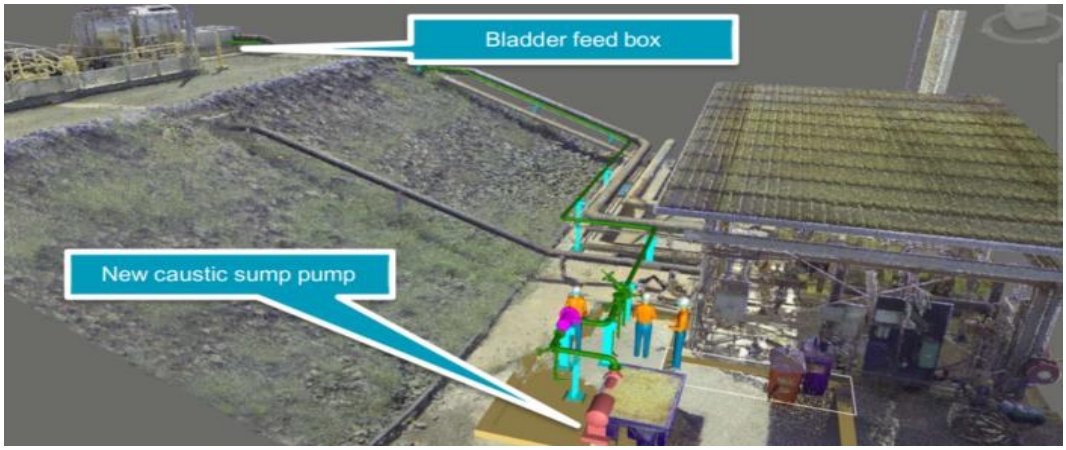


Figure 5 - Caustic Sump Operations

12. TABLES & FIGURES

12.1. Tables

12.2. Figures

13. DOCUMENT CONTROL

13.1. Key Information

Document Title:	AS-PL-009 Acid Sulphate Soil Management Plan	**Effective Date:**	_____/_____/_____
Prepared By:	IMS Specialist (Paul Zomer)	**Approved By:**	Construction Manager (Daryl Henderson)
Current Version:	(As per Document Register)	**Version Date:**	_____/_____/_____
Review Date:	_____/_____/_____	**Review Frequency:**	3 Years
Document Controller:	IMS Specialist (Paul Zomer)	**Document Owner:**	Construction Manager (Daryl Henderson)

13.2. Revision/Modification History

Version:	Execution Date:	Author	Summary of Changes	Initials:
1.0	_____/_____/_____	Paul Zomer	Document Created.	P.Z.

13.3. Communication & Distribution

Distributed To:	Distribution Method:	Date of Issue:	Version:
Project Team	Pre-Start Meetings	_____/_____/_____	1.0

13.4. Linked Documentation

(documents that have been linked or referenced to in the text of this document)

Registration No:	Document Title:	Document File Path:	Issue Date:	Version No:
AS-PO-003	Environmental Policy Statement	C:\Droplink\5. Aestec Server IMS\2. Document Control\1. Policy Statements	08/01/24	5.0
AS-PR-001	Document Control Plan	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Plans	07/05/25	4.2
AS-PR-005	Corrective Action & Improvement Procedure	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Plans	02/06/25	3.2
AS-PR-006	Risk & Opportunity Management Procedure	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Plans	05/02/25	3.4

APPENDIX A – ASS/ARD RISK ASSESSMENT GUIDELINES

- Overview the physical characteristics and environmental attributes of the site, including:
  - geology and hydrogeology of the site; and
  - presence of sensitive environmental receptors including surface water bodies and groundwater. Maps are available from the Specialist Environment
- Describe the occurrence of ASS or ARD on the site, including;
  - a map of the site distribution of ASS or ARD; and
  - results of the preliminary ASS or ARD assessment.
- Overview of the proposed works including:
  - the dewatering and drainage strategies;
  - the soil excavation strategy;
  - delineation of any clay and peat lenses and horizons that may affect dewatering or excavation of soil;
  - temporary storage of ASS or ARD, if proposed; and
  - reuse / disposal of excavated ASS or ARD.
- Detail the potential on-site and off-site effects of the disturbance. Include a risk assessment, which shall be used to determine the appropriate treatment and management options;
- Describe the management and treatment strategies to minimise impacts from the site works. Options for the treatment and management of ASS or ARD shall be undertaken in accordance with the Queensland Acid Sulphate Soil Technical Manual (Dear et al 2002) and include:
  - strategies for preventing the oxidation of iron sulphides (including avoiding the disturbance of ASS or ARD by redesigning layout of the excavations and/or re-flooding of potential ASS or ARD to limit oxidation);
  - treatment strategies for ASS or ARD (including neutralisation of ASS, use of lime/limestone barriers, burial of potential ASS);
  - strategies for management of the water table level on and off-site both during and
  - post construction; and
  - containment strategies to ensure that all contaminated storm water and acidic leachate associated with the oxidation of ASS or ARD is prevented from entering the environment both in the short and long-term;
- Develop performance criteria to assess the effectiveness of the ASS or ARD management and monitoring measures;
- Describe the contingency procedures to be implemented on the site to deal with unexpected events or in the event of failure of management procedures.
- Develop a monitoring program for soils and surface and ground water quality should be designed to enable the effectiveness of the management strategy to be assessed.

If in doubt contact the Specialist Environment for assistance or further information.

APPENDIX B – RMA ASS/ARD DISPOSAL FORM (RTY COPY)

Date	/ /	**Project no#**		

Note for applicant:
•This application is to be completed and signed off by the relevant authorisers prior to the commencement of works that will result in the disposal of ASS or ARD materials at the RMA
•Additional documentation and drawings may be required to support elements of this application. Failure to supply these may delay the approval of any development.

Project Description	
Project location and timeline	**(What ,when and where)**
List of Attachment (if applicable)	

Information Required	**Comment/ Action Taken**
What is the volume of ASS/ARD to be disposed of at the RMA	
Has a sampling regime been conducted to confirm the presence of ASS or ARD?	**(Attach analysis results)**
What is the material that is to be disposed of: composition, reactivity, potential hazards and handling issues?	
Has an ASS/ARD management plan been completed?	**(Attach management plan)**
Has all other options been assessed?	**(Attach treatment option assessment)**
What are the key benefits to HSEC and the business that will be achieved through disposal at the RMA?	
Has TPI been contacted to advise on transportation and tracking requirements?	
Has a disposal plan been developed	**(attach disposal plan)**
Additional comments or mitigation	

measures?		
Disposal Plan		
What is the expected deliver date to the RMA?		
Where has the RMA Superintendent suggested dumping ASS/ARD? (map)		
Is ASS within an active mud farming area (GPS location)?		
Is the mixing ratio agreed by technical team or ASS/ARD technical expert/consultant?		
Is there potential for runoff from the ASS/ARD to enter stormwater drain or waterway or impact off-site location/		
Are there any stockpiles at the RMA greater than 2 weeks old?		
Are there any residual risks that need to be risk assessed by the Specialist Environment or Superintendent RMA?		
Approvals		
Initiator	**Name**	
	Signature	
	Date	
Specialist Environment	**Name**	
	Signature	
	Date	
RMA Superintendent	**Name**	
	Signature	
	Date	
Area Manager	**Name**	
	Signature	
	Date	
	Signature	
	Date	

AESTEC SERVICES

BUILDING * PLUMBING * CIVIL

AS-PL-009

ENVIRONMENTAL MANAGEMENT PLAN

Version: 1.0

PY368H – Caustic Transfer Station Sump Pump

RTY Yarwun

INTRODUCTION

1. General Overview

Aestec Services (Aestec) is committed to sustainable development throughout operations which covers all areas of the organisation. Continual improvement in environmental performance will be achieved by setting objectives, measuring progress, and communicating results.

To deliver on Aestec's Environment sustainable management & development, Aestec will:

- Communicate Aestec's Environmental Policy and Procedures to all employees;
- Comply with all applicable environmental laws, regulations, statutory obligations, and relevant voluntary codes of practice;
- Make business decisions that work towards achieving sustainable development;
- Ensure that our employees, subcontractors, suppliers, and consultants are aware of and have the necessary skills to fulfil their environmental obligations with respect to operations;
- Strive to conserve resources, reduce waste, and eliminate or minimise adverse environmental effects and risks that may be associated with our services and operations;
- Collaborate with our clients and other stakeholders to help them achieve their environmental objectives and obligations;
- Periodically review and revise our Environmental Policy and Procedures to maintain their relevance.

We will respond to the environmental challenges in all areas of our business, and it is the responsibility of every employee to implement this plan.

2. Scope

This document describes the Environmental Management Plan (EMP) to be used to ensure impact to the environment is managed and controlled. Work undertaken by Aestec will follow a consistent workflow/processes as described within this document. Deviations from these processes can only occur:

- Under specific instructions/direction of our client(s); and
- With written authorisation from RTY Yarwun representative.

3. Legislation & Relevant Guidelines

This document is based on the following:

- AS/NZS ISO 14001, Environmental management systems - Specification with guidance for use; and
- Soil Erosion and Sediment Control, Engineering Guidelines for Queensland Construction Sites, published by the Queensland Division of the Institution of Engineers Australia.
- Environmental Protection Act 1994 (EP Act) - key elements to assess environmental impacts.
- Environmental Protection Regulation 2019 - the project's relevant impacts are assessed under the regulation.
- Environmental Protection (Waste Management) Regulation 2000
- Environmental Protection (Air) Policy 2019
- Environmental Protection (Noise) Policy 2019
- Environmental Protection (Water and Wetland Biodiversity) Policy 2019

4. Definitions

Term / Acronym	Definition
DERM	The Department of Environment and Resource Management (DERM) was formed on 26 March 2009 by merging the former Department of Natural Resources and Water and the former Environmental Protection Agency.
DESI	Department of Environment, Science, and Innovation.
Environment	Includes: a) ecosystems and their constituent parts, including people and communities; and b) all natural and physical resources; and c) the qualities and characteristics of locations, places, and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony, and sense of community; and d) The social, economic, aesthetic, and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).
Environmental Harm	Is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration, or frequency) on an environmental value, and includes environmental nuisance. May be caused by an activity: a) whether the harm is a direct or indirect result of the activity; or b) Whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.
Environmental Impact	Any change to the environment, whether adverse or beneficial or partially resulting from an organisation's activities, products, or services.
Environmental Nuisance	Is unreasonable interference or likely interference with an environmental value caused by: a) noise, dust, odour, light; or b) an unhealthy, offensive, or unsightly condition because of contamination; or c) Another way prescribed by legislation.
Environmental Value	Is: a) a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or b) Another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.
Serious Environmental Harm	Is environmental harm (other than environmental nuisance): a) that causes actual or potential harm to environmental values that is irreversible, of a high impact or widespread; or b) that causes actual or potential harm to environmental values of an area of high conservation value or special significance; or c) that causes actual or potential loss or damage to property of an amount of, or amounts totalling, more than the threshold amount; or d) that results in costs of more than the threshold amount being incurred in taking appropriate action to:

	• prevent or minimise the harm; and • Rehabilitate or restore the environment to its condition before the harm.
Environment Management Plan (EMP)	Environmental management plans describe how an action might impact on the natural environment in which it occurs and set out clear commitments from the person taking the action on how those impacts will be avoided, minimised, and managed so that they are environmentally acceptable.
The Company / Aestec	Aestec Services Pty Ltd
Waste	Includes anything that is: a) left over, or an unwanted by-product, from an industrial, commercial, domestic, or other activity; or b) Surplus to the industrial, commercial, domestic, or other activity generating the waste.

5. Scope of Work

This scope details the Works included to safely supply, fabricate, assemble, install and test the new caustic transfer station sump pump with all associated piping and steelwork inclusive of all quality assurance tasks.

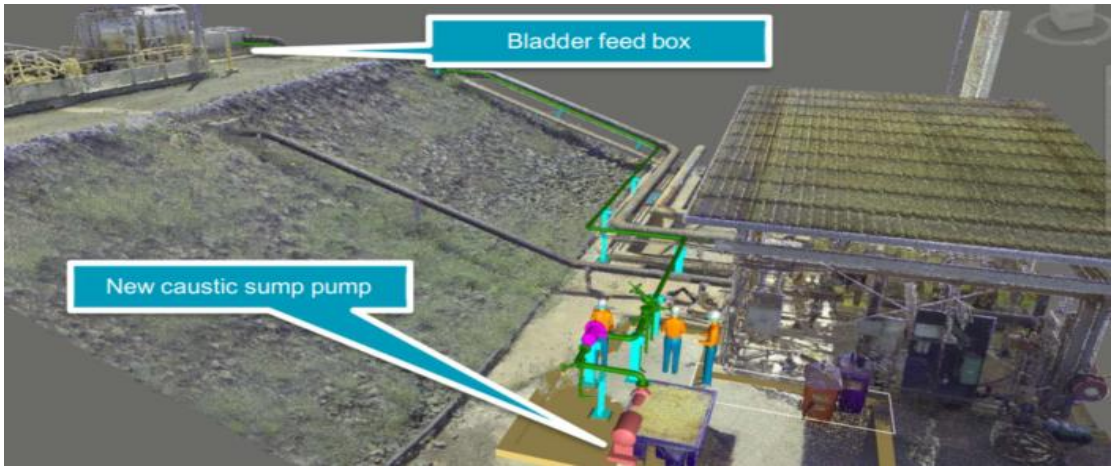
Refer to 180GSW8004 Rio Tinto Yarwun Projects Caustic Transfer Station Sump Pump.

5.1. Site Location

The scope of works will be carried out at the caustic sump located at Area 180 as depicted below.

5.2. Battery Limits

The battery limits and for the Works are detailed on P&IDs P03-180Z(2D)10106 and P06-180Z(2D)10102. There is only 1 tie-in point for this project which is TI-180-026 on the bladder feed box.



6. Environmental Policy

Aestec Services is committed to minimising environmental impact during operations, Aestec Services prioritises the prevention and protection of the environment through a continuous cycle of planning, implementing, reviewing of the actions required to improve the environmental and social sustainability obligations.

Aestec Services achieves environmental performance by:

- Considering our operational impact through continuous awareness, analysis, and what potential impact those operations may carry.
- Proactively undertaking control activities to minimise impact or other adverse effects on the air, water, land, natural resources, flora, fauna, humans, (including cultural) and their interrelation.
- Understanding environmental compliance within the State/Territory and ensuring a strict adherence in the fulfilment of those obligations.

Aestec Services observe three environmental aspects of its business undertaking:

- Resource consumption;
- Recycling; and
- Waste minimisation.

In this endeavour, Aestec Services will count compliance with all applicable environmental legislation as integral to achieving its objectives. With specific regard to achieving the broad Environmental objectives of this policy Aestec Services will ensure that adequate resources are provided to fulfil this commitment, and will:

- Develop and implement environmental, waste management and recycling initiatives;
- Provide staff with information guidelines and training that encourage responsible environmental, socially sustainable and waste management behaviour;
- Where possible, source efficient and environmentally sustainable products and services locally; and
- Encourage our staff to actively participate in our environmental and sustainable business practices, offering employees the opportunity to be a client sustainability champion.

Waste Management Plans for head office, workshop and job sites shall be developed and communicated to all employees, sub-contractors, and visitors. These plans shall include detailed information on how to recycle, reduce, handle, and dispose of waste for each site. We shall also adopt, and carry out responsibilities of, all Environmental Management/ Protection Plans of our clients where appropriate.

This policy, along with relevant environmental objectives & targets, shall be reviewed at least annually at our formal management review meetings.

7. Environmental Licences, Permits, and Approvals

No Licences, Permits or approvals other than authorisation from RTY Yarwun are required under this project as the relevant processes have already been implemented by RTY Yarwun.

8. Roles and Responsibilities

8.1. General

All site personnel are responsible for conducting the works in accordance with the procedures and such that any potential impacts on the environment is eliminated or minimised.

8.2. Project Manager

The Project Manager is responsible for:

- The establishment, maintenance, and approval of this Environmental Management Plan in accordance with the requirements of the contract;
- Provision of adequate and suitable resources;
- Ensuring that all Project employees have a clear understanding of the environmental requirements relevant to their area of work and their responsibilities within their areas of work;
- Reviewing the HSEQ Inspection reports prepared by the HSEQ Specialist and following up on any incidents/non-conformances until issue has been resolved;
- Chairing site meetings and ensuring environmental issues are included in the meeting agenda; and
- Ensuring that environmental reporting requirements are implemented.

8.3. HSEQ Specialist / HSE Advisor

The HSEQ Specialist / HSE Advisors are responsible for:

- Providing all necessary training including induction of all project personnel into project environmental matters;
- Reviewing construction methods to check that adequate environmental management measures are incorporated into the planning of particular construction processes; and
- Acting upon reports/observations of potential or existing environmental hazards as recorded in the monthly reports.

8.4. Project Supervisor

The Project Supervisor (both Company and Subcontractor) is responsible for:

- Ensuring that all construction activities are conducted in accordance with the specified environmental controls;
- Undertaking and reporting on the implementation and effectiveness of the specified environmental controls;
- Undertaking the Monthly HSE Inspection Reports (AS-SF-052 HSE Work Area Inspection)
- Implementing corrective action to rectify environmental incidents and non- conformances identified on inspection reports in accordance with procedures, and
- Ensuring that no work commences prior to the submission of appropriate permits.

8.5. Leading Hand

Leading Hands (both Company and Subcontractor) is responsible for:

- Identifying and reporting any existing or potential adverse environmental impacts on site;
- Ensuring the work under their control is conducted in accordance with environmentally sound work practices; and
- Providing suitable leadership to labour and subcontractors with regard to environmental issues.

8.6. Employees

Employees (and subcontract employees) are responsible for:

- Complying with acceptable safe environmental practices; and
- Identifying and reporting any existing/potential adverse environmental impacts on site.

TRAINING & COMPETENCY

1. Site Inductions

All personnel employed on the project participate in Site Inductions. The environmental section of which shall:

- Introduce the:
  - Aestec's Environmental Policy Statement;
  - Reasons for the Policy – environmental duty of care and/or obligations;
  - Projects environmental awareness aspects:
- Review in detail those elements of the Environmental Management Plan which relate to the work to be conducted by the person or persons being inducted and their responsibilities under the Environmental Management Plan; and
- Review procedures to be followed in the event of an emergency and report any incidents or accidents.

Aestec's environmental induction will form part of the site inductions in addition to client induction requirements. The client will be given the opportunity to review and comment on the induction content prior to delivery.

2. Communication

Communication of all relevant environmental issues, such as new procedures, products or identified environmental hazards shall be passed on to employees and sub-contractors during:

- Pre-start Meetings;
- Toolbox Meetings;
- Client Meetings: and
- Management Meetings.

All meetings shall encourage feedback from the attendees and shall seek to overcome any communication difficulties between all parties, e.g. (Technical interfaces, different work crews). A record shall be kept of the topics discussed at the Pre-start and Toolbox Meetings, and minutes shall be taken during all Client and Management Meetings.

Signage indicating environmental issues/requirements shall be clearly visible, kept in good repair, and promptly removed when no longer required.

EMERGENCY PREPARDNESS

1. General

Procedures for Spill Response are documented in Emergency Response Plan for this project. The basic principles of spill management are detailed below.

2. Spill Management

2.1. Sources

Potential exists for minor spills due to the construction activities. Main spill risks associated with this project are:

- Oil from plant lubrication spilling during servicing;
- Diesel from refuelling plant;
- Rupture of fuel/oil storage facilities
- Spillage of chemicals onto land
- Rupture of hydraulic lines
- Tracking of mud onto adjoining road

Transport will be in accordance with the project safety regulations, good practice, and manufacturer recommendations.

An appropriate spill kit, personal protective equipment, and relevant operator instructions/emergency procedure guides for the management of wastes, chemicals and flammable and combustible liquids associated with the activity must be kept at the site at all times. All personnel operating with wastes, chemicals or flammable and combustible liquids shall be trained in the use of the spill kit.

The spill response kit with clean up equipment will be stored adjacent to work activities and in the workshop container. The kit will contain absorbent pads and granules suitable for diesel, oil, and chemicals as well as personal protective equipment. Upon use, the spent adsorbent material will be disposed of in accordance with Aestec and Client waste procedures.

Appropriate bunding or other containment techniques will be used at identified hazard locations such as diesel/fuel storage. Hazardous waste spill management procedures shall be in accordance with the clients' specified spill and waste management procedures.

On site Emergency Management Plan will cover actions to be taken if a spill occurs. The Project Manager is the emergency contact in the event of a spill. Spill management, in order of priority is as follows:

- Ensure safety of any persons – either workers or others involved in the event;
- Control source;
- Contain spill;
- Notify relevant personnel;
- Clean up spill; and
- Correctly dispose of contaminated cleaned up material.

2.2. Waste Management

Our waste management objective is to minimise the amount of waste generated on-site as a result of Aestec's construction activities. The Performance indicator we measure ourselves against is that No contamination or environmental impact occurs on site during the construction phase.

More information on regulated waste management, including waste tracing requirements, management actions, responsibilities and corrective actions are outlined in Aestec's Waste Management Plan.

INCIDENT & ACCIDENT INVESTIGATION

Refer to Aestec's Incident Investigation Management & Reporting Procedure for the Standard Procedures for Incident Reporting and Investigation.

The Client is responsible for all communications with the public, and the Project Manager is responsible for ensuring that any agreed action to resolve environmental issues is conducted and followed up. All legitimate complaints will be documented, and then conveyed to the Client.

1. Inspections

Environmental issues shall be part of the Monthly Inspections. Refer to Aestec's Risk, Aspect & Opportunity Management Procedure for details on Monthly Inspection requirements.

Aestec's Safety Management Plan outlines Aestec's Safety related Key Performance Indicators.

Environmental audits shall be conducted monthly by the HSEQ Specialist or his assigned delegate.

2. Complaints

Aestec manages all Project Complaints through Aestec's Control of Non-Conforming Products Procedure, pursuant to which:

- All complaints regarding environmental performance will be referred to the PM;
- The following details relating to any environmental complaints will be recorded:
    - date of complaint,
    - name, address, and telephone number of complainant,
    - nature of complaint, (written description),
    - response action taken and date;
- Environmental incidents raised by regulatory authorities and incidents that could potentially lead to legal action will be reported immediately to the PM;
- Complaints will be actioned without delay and a written response forwarded to the complainant within 14 days of the complaint being received. In the event that a complaint cannot be resolved within the 14-day period, a further response will be forwarded to the complainant immediately resolution is achieved; and
- Action in response to any complaint/s of alleged property damage arising from the project will be initiated within 24 hours of the complaint/s being received, and such action will include cessation of the project related activity alleged to have caused the damage pending resolution of the complaint/s through negotiated agreement with the complainant/s or, if agreement cannot be negotiated, through arbitration.

3. Corrective & Preventative Actions

Project Personnel must notify the Project Supervisor and IMS Specialist of all environmental incidents so that immediate action can be undertaken. Environmental incidents will be investigated to prevent a repeat of the event and will include the following:

- Identifying the extent of the incident;
- Identifying and implementing the necessary corrective actions;
- Identifying the personnel responsible for conducting the corrective action;
- Identifying who was responsible for the incident so that additional training can be offered;
- Implementing or modifying controls necessary to avoid a repeat occurrence of the incident
- Documenting incident (including photos' if necessary); and
- Conducting follow up inspection of location where incident occurred and if necessary, implementation of monitoring program (e.g. water quality testing if incident was in waterway).

All Corrective and Preventative actions are undertaking in accordance with Aestec's Corrective Action & Improvement Procedure. Implementation of this EMP will assist in the prevention of environmental incidents.

The Project Manager should daily monitor weather forecasts to determine if storm events are likely.

It is the Project Manager's responsibility to distribute the information to the wider project team. This will enable the project team to ensure control measures are able to minimise the impacts of the storm.

MANAGEMENT REVIEW

1. Monthly Reviews

The effectiveness and proper implementation of this Environmental Management Plan will be reviewed weekly. Items to be reviewed include:

- Environmental performance on current and completed work.
- Investigation into incidents, complaints, and non-conformance.
- Changes to construction activities and control documents.
- The results of the weekly environmental report.
- Follow up on outstanding corrective actions.

Weekly reviews shall be documented. The Project Manager shall review these reports. Where necessary, an Action Plan shall be developed to address each of the environmental issues identified on site (air emissions, noise, hazardous materials, waste disposal, housekeeping, spillage is etc.).

Actions to be taken are delegated and remain “live” at subsequent meetings until the issue is satisfactorily closed out.

2. Monthly Reports

The Project Manager shall ensure the timely production of the Project Monthly Report which shall contain a section on environmental issues.

3. Management Review

The Project Manager shall conduct a review with the HSE Advisor every month by examination of the environmental statistics for that month. Other Project reviews shall take place as a result of environmental audits. Any identified or documented improvements to the safety system shall be considered and, if suitable, implemented. Other sources of information for improvement shall be from suggestions from employees, employees, the Client, or the public.

A review of the Environmental Management Plan shall be undertaken following scheduled audits, by the Project Manager, Project Supervisors and HSE Advisor. This review shall include, but not be limited to:

- An evaluation of the suitability of the Environmental Policy;
- A review of performance as measured by the performance indicators;
- An evaluation of the continuing effectiveness of the Project Environmental Management Plan in the light of:
    - changing legislation;
    - changing Client expectations;
    - changes in activities;
    - changes in the Project Organisational structure;
    - advances in science and technology;
    - reviews of incidents and injuries;
    - reporting and communication; and
    - Employee feedback.

Suggested improvements shall be discussed with the Project Manager for input and approval of any corrective or preventive action to improve Project environmental management and the Environmental Management Plan.

SITE CONTROLS

1. Noise & Vibration Management	
Potential Impacts:	The potential impacts of the project on existing noise and vibration levels are likely to be from increased traffic at the site, generators, earthmoving machinery, and other vehicles during the construction activities.
Management Objective:	To ensure that noise and vibration from activities associated with construction are within acceptable limits at all nearby receptors.
Performance Criteria:	Noise will be managed by limiting project activities where possible before 6am and after 6pm.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Preference shall be given while selecting plant and equipment for construction works to those, which minimise noise emissions.	Project Supervisor	Weekly checks shall be undertaken to ensure the manufacturers operating specifications are being complied with.	Where practicable, noisy plant equipment and processes will be substituted with alternatives.
Regular checks are to be undertaken to ensure all equipment and vehicles are in good working order and are operated correctly. Checking shall include: • Engine covers; • Defective silencing equipment; • Rattling components; and • Leakages in compressed air lines.	Project Supervisor Subcontractors	Undertake regular inspections & servicing of equipment and vehicles to ensure it is in good working order. Fortnightly checks shall be undertaken to ensure the manufacturers operating specifications are being complied with.	Undertake maintenance work on vehicles and equipment as identified during services and inspections. Schedule more regular maintenance/inspections as required.
Equipment not in use shall be shut down.	Operators	Daily inspections of the site will be undertaken to ensure that equipment not in use is shut down.	Re-train relevant employees to shut down equipment when not in use.
Trucking/Delivery routes to and from the site will be selected to minimise disturbance to residential areas and local traffic.	Project Supervisor Subcontractors	Regularly check transport routes to the construction site to ensure those recommended are being used.	Re-train relevant employees on nominated transport routes to and from the construction sites.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Noise complaints will be managed as per noise complaints system outlined above.	Project Supervisor Project Manager	Refer to Incident and Complaint Responses Section.	Refer to Incident and Complaint Responses Section.

2. Geology & Soils (PASS)	
Potential Impacts:	The potential impacts of the project on geology and soils are likely to be the redistribution of soils and subsequent sedimentation of water courses.
Management Objective:	To minimise disturbance to soils, during construction.
Performance Criteria:	Restrict soil disturbance as much as possible through staging areas of disturbance within the construction timeline; and Construction operations are to be undertaken in such a manner that contributes to the achievement of water quality guidelines contained in the Environmental Protection (Water and Wetland Biodiversity) Policy 2019.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Management of PASS/ASS present in the project area.	Project Manager Project Supervisor	Monitoring will be undertaken during construction activities according to regulatory guidelines. Soil monitoring not satisfactorily identify areas of PASS/ASS then sampling and monitoring methodology will be reviewed to improve effectiveness. Scope and frequency of reporting relative to PASS/ASS management will be by agreement with RTY Yarwun but will, as a minimum, comprise a Monthly report capturing the key criteria. If an incident occurs, this will be reported to the relevant statutory authority as per regulatory polices/guidelines.	Site induction/training in the monitoring and management of PASS/ASS to relevant contractors. If PASS/ASS is found, then appropriate management measures will be implemented as per DESI Policies/guidelines. Project design is to incorporate corrosion resistant design materials based upon field identification of acid sulphate soils, if required.

3. Air Quality	
Potential Impacts:	The potential impacts of the project on air quality are likely to be dust generation due to construction works.
Management Objective:	To minimise the impact of construction related vehicle, dust and particulate emissions on neighbouring residents and other sensitive receptors in the locality.
Performance Criteria:	Construction operations are to be undertaken in such a manner that contributes to the achievement of air quality guidelines contained in the Environmental Protection (Air) Policy 2019.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Restrict stripping and excavation activities during dry and windy conditions.	Project Supervisor	Monitor weather conditions daily to ensure activities likely to cause dust emissions are programmed for more suitable times.	Water construction site to suppress dust generated by unfavourable conditions. Postpone works to a time when atmospheric conditions are more suitable.
Regularly water the construction site and unsealed access roads during dry and windy conditions.	Project Supervisor	Monitor dust in the event of a validated complaint. Record all air quality (including odour) complaints, proposed corrective action and results.	Modify water suppression regime where practicable to meet performance criteria. Respond to dust complaints promptly as per complaints system established during monitoring and reporting phase.
Fit dust suppression and/or emission control devices to all equipment and machinery where available.	Project Supervisor	Monitors (visually) dust and exhaust emissions generated by vehicles and machinery. Particular attention should be made when vehicles are accelerating or leaving the site.	Vehicles, machinery, and other plant with excessive emissions will be shut down and maintenance will be undertaken to rectify the problem.
Notify local residents of any emissions and/or dust to be generated by any particular activity, machinery, or plant.	Project Supervisor	Monitor emissions generated by the activity, machinery or plant ensuring that the performance criteria are not exceeded. In the event of a validated complaint, monitor emissions as described above.	Notify residents as early as practicable.

4. Water Quality	
Potential Impacts:	The potential impacts of the project on water quality are likely to be: • increased suspended solids in stormwater runoff during construction works; • hydrocarbon pollution of stormwater and surface water from oil and fuel leaks/spills during construction and traffic conditions during operations; • chemical spillages from construction site and vehicle accidents along the road; and • Localised increase in litter from construction activity and traffic using the road.
Management Objective:	To establish and maintain drainage and soil protection system (comprising sediment and erosion control devices) which prevents erosion and does not decrease water quality during construction.
Performance Criteria:	All site discharges from disturbed areas to pass through erosion and sediment control devices. Implementation of Best Practice, in accordance with: • minimising disturbance; • drainage control; • erosion control; and • sediment control; All site discharges from construction sites and stormwater runoff will comply with the Environmental Protection (Water) Policy. Construction operations are to be undertaken in such a manner that contributes to the achievement of water quality guidelines contained in the Environmental Protection (Water and Wetland Biodiversity) Policy 2019.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Pre-Construction			
Ensure an Erosion and Sediment Control Plan (ESCP) is developed and put in place.	Project Manager	Conduct as part of establishment to site.	Install devices as recommended.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Baseline water quality data may be obtained in any nearby water catchments.	Project Manager	Parameters to comply with the Environmental Protection (Water and Wetland Biodiversity) Policy 2019.	Water quality testing to be obtained prior to commencement of works.
Erosion & Sediment Control			
Ensure all soil erosion and sediment control devices are installed prior to construction site establishment and/or site disturbance.	Project Supervisor	Inspect construction site to ensure all appropriate devices are installed. Sediment controls in place as per the site Facilities Map (sediment fences) Overall site is captured with the sediment ponds already constructed (northwest of job site) as part of previous works.	Install devices as recommended.
Run-Off			
Stormwater leaving the site should be visually monitored. If monitoring other than visual is requested by the Principal, it must be requested in accordance with the DESI Monitoring and Sampling Manual 2018.	Project Supervisor Project Manager	Parameters to comply with DESI Monitoring and Sampling Manual 2018.	If the Principal instructs other than visual monitoring, then frequency to be identified and followed.
Clearing of existing vegetation (e.g. grassed areas) should be minimised to prevent exposure of loose soil.	Project Supervisor	Clean water run-off is to be diverted away from disturbed or exposed surface areas including around stockpiles, material storage areas, fixed plant, and equipment locations.	Modify water diversion bunds or sediment controls to ensure.
No maintenance or refuelling activities is to occur within 30 metres of a waterway or drainage line.	Project Supervisor Operators	Conduct fuelling operations at designated areas or at go- line.	Train construction employees on requirements emphasising refuel procedure/s.
Stormwater Quality Control			
Check all construction vehicles and equipment weekly for fuel, oil, and chemical leaks.	Project Supervisor	Inspect vehicles and equipment regularly for leaks.	Investigate the replacement of vehicles/ equipment in the event that leaks continue.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Diesel fuel, chemicals and other hazardous material are stored in bunded areas.	Project Supervisor	Inspect areas regularly to ensure no chemicals stored incorrectly.	All chemicals to be removed from incorrectly stored areas.
Contain rubbish and waste materials in suitable facilities to ensure they do not litter stormwater drains.	Project Supervisor	Refer to the Waste Management Section.	Refer to the Waste Management Section.
Inspect all drainage, erosion, and sediment control structures to ensure sufficient capacity is available to contain storm events.	Project Supervisor Subcontractors	Inspect daily and immediately following storm events and maintain erosion and sediment control devices.	Emergency sediment control material (i.e. sediment fencing) to be stored on-site for the duration of construction works and implemented as required.
Cleaning of equipment and/or vehicles used during the construction will not be undertaken in areas that cause flow of untreated wastewater into drainage lines. Use of Aldoga wash facility to be utilised where possible.	Project Supervisor Subcontractors	Inspect drainage lines daily for signs of contamination. Refer to the Geology and Soils Section.	Refer to the Geology and Soils Section.
Mud Tracking Onto External Roads			
All vehicles exiting site are to traverse over a rumble strip to dislodge any mud hung up on body. Any mud tracked onto the road to be cleaned immediately with water truck. Personal carpark and access to it off the road to have gravel installed over existing ground.	Project Supervisor Project Manager	Inspect Roadway daily and hourly when large amounts of deliveries are being brought in or out of site.	Clean Roadway where required Clean out and replace rumble strip if filled Resurface carpark and entrance if required.

5. Waste Management	
Potential Impacts:	The main potential impact of the project on waste management is likely to be generation of solid and liquid wastes during the construction phase of the project such as containers, drums, metals, cardboard, and spoilt material.
Management Objective:	To minimise the generation of construction wastes, maximise the recycling of materials and where required, ensure disposal of wastes at approved locations.
Performance Criteria:	Liquid wastes stored/generated on site will be managed in accordance with AS 1940:2017. Recyclable construction materials (i.e. steel) shall be sent to approved recycling facilities. Non-recyclable materials/wastes (including regulated and hazardous wastes) shall be disposed of at licensed landfill sites in line with Aestec and Client Waste Management Plans. During construction, recyclable materials shall be substituted for non-recyclable materials, where practicable. All regulated waste removed from site must be removed by a person who holds a current approval to transport such waste under the provisions of the Environmental Protection Act 1994. A record of all wastes must be kept detailing the following information: • date of pickup of waste; • description of waste; • quantity of waste; • origin of waste; and • destination of the waste **Note:** Traceable wastes as listed in **Schedule 1** of the Environmental Protection (Waste Management) Regulation 2000 are not covered by this condition. Traceable wastes have similar recording requirements to this condition in accordance with a waste tracking system established under the above regulation.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Prepare an emergency plan for accidental spills and implement as required.	Project Supervisor	In consultation with client notify EPA of any instances of material or serious environmental harm. This shall be recorded with all non-compliances reported to the Project Manager.	A review of the Contingency Plan shall be undertaken to ensure appropriate procedures are in place for managing spills. Alternative

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
			measures shall be recommended as appropriate to the nature of the non-compliance.
No waste is to be buried or burnt on-site.	Project Supervisor	Regularly inspect waste collection areas and waste stockpiles to ensure that they comply with the SPS waste management procedures.	Train construction staff on waste disposal requirements emphasising reduce, reuse, and recycle principles.
Site Facilities (Offices, Crib rooms, Amenities) to be cleaned at least once a day.	Project Manager	Regularly inspect site facilities to ensure that they are being cleaned every day. Organise waste removal based on skip bin capacity.	Immediate clean of identified area to take place from the site cleaner. All bins emptied into the site skip bin, floors mopped, surfaces wiped down, fridges cleared out fortnightly. Site skip bins will be cleaned out at 75% capacity.
Amenities emptied at 75% capacity.	Project Supervisor	Inspect waste tank for capacity level weekly, or as required based on current site manning.	Organise Gully truck to attend site for pumping of waste tank within the same week. Ensure that tank is emptied before allowing gully truck to leave site.

6. Hazardous Goods	
Potential Impacts:	Contamination of site with waste fuel, oils, and chemicals; and Contamination of surface or ground waters & damage to aquatic ecosystems by the release of fuel, oils, and chemicals in stormwater runoff from the site.
Management Objective:	To minimise land contamination by appropriate handling and disposal of hazardous goods.
Performance Criteria:	There will be no contamination from chemicals, oils or fuels associated with the construction. All storage and handling of flammable and combustible liquids will be undertaken in accordance with AS 1940:2017. All regulated waste removed from site must be removed by a person who holds a current approval to transport such waste under the provisions of the Environmental Protection Act 1994. Each container of regulated waste must be marked to identify the waste contained therein. A record of all wastes must be kept detailing the following information: • date of pickup of waste; • description of waste; • quantity of waste; • origin of waste; and • destination of the waste. **Note:** Traceable wastes as listed in **Schedule 1** of the Environmental Protection (Waste Management) Regulation 2000 are not covered by this condition. Traceable wastes have similar recording requirements to this condition in accordance with a waste tracking system established under the above regulation.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Containment and cleanup equipment will be kept close to tanks and barrels to minimise spill response time and will include sufficient absorbent to capture the largest foreseeable spill.	Project Supervisor Subcontractors	Project Supervisor will ensure the site is inspected daily for fuel & chemical spillages and leakages or evidence that fuels and chemicals have not been disposed of in the appropriate manner.	A review of the EMP shall be undertaken to ensure appropriate procedures are in place for managing spills. Alternative measures shall be recommended as appropriate to the nature of the non-compliance.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
		If a fuel or chemical spill results in pollution of the environment, the Project Manager shall inform the Client immediately, who may notify DESI if deemed appropriate.	
Waste lubricants and oils are to be contained and taken off site for recycling and/or disposal.	Project Supervisor Subcontractors	Project Supervisors will ensure the site is inspected daily for waste oil and lubricant spillages and leakages or evidence that waste lubricants and oils have not been disposed of in the appropriate manner.	All hazardous chemicals to be stored on-site in accordance with provisions in the Environmental Protection Act 1994
Measures to prevent the discharge of fluids into streams and watercourses will include the following: • bunds and collection vessels; • absorbent materials in quantities to capture the largest foreseeable spill; and • Disposal drums or containers suitable for holding and transporting contaminated materials.	Project Supervisor Subcontractors	Project Supervisors will ensure the site is inspected daily for waste oil and lubricant spillages and leakages or evidence that waste lubricants and oils have not been disposed of in the appropriate manner. If a fuel or chemical spill results in pollution of the environment, the Construction Contractor shall inform the Client immediately, who may notify DESI if deemed appropriate.	All hazardous chemicals to be stored on-site in accordance with provisions in the Environmental Protection Act 1994

7. Weed Management	
Potential Impacts:	Potential to disperse weeds into areas of remnant vegetation where weed species do not currently occur. contamination of surface water & areas through the movement of soil, and attachment of seed (and other propagules) to vehicles and machinery. Reduction of the habitat quality of the site for threatened species.
Management Objective:	Minimise the opportunities for the introduction and expansion of weed species and minimise their ranges and/or abundance within the subject land. Minimise or eliminate the potential impacts of weeds on threatened flora and fauna species.
Performance Criteria:	Assessment of project area and temporary existing access tracks located around the site for noxious weed infestations, with subsequent reviews at two (2) or three (3) monthly intervals depending on the season. Implementation of a management regime based on findings of initial and subsequent weed infestation inspections. Continual monitoring of stockpiles and identified weed infestation sites for weed growth.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
Erosion and sediment controls are to be installed during and immediately following construction, to protect bushland and watercourses from infestation by weed seed transported in water or sediment.	Project Supervisor Subcontractors	Project Supervisor / Project Manager will ensure the site erosion and sediment control measures are installed in the appropriate manner.	Repair or install erosion control measures as deemed necessary.
Vehicles and heavy machinery are to be checked before entering construction worksites by the Supervisors, so that weed materials are not transported into worksite areas. If weed materials (seeds, vegetative components etc) are found, the machinery is to be taken to a weed and seed wash bay to dispose of the material.	Project Supervisor Subcontractors	The Supervisor will ensure the vehicles and heavy machinery is inspected prior to allowing on-site. Any evidence of weed contamination will result in the machinery not being allowed on-site, until such time measures have been taken to ensure compliance. Weed and Seed to be completed for all vehicles being brought onto and off of site. All vehicles	Ensure all plant is inspected for cleanliness prior to arriving on-site.

Management Action	Responsibility	Monitoring & Reporting	Corrective Action
		that don't pass the weed and seed will be sent to the Aldoga wash facility for cleaning.	

APPENDIX A – WEEKLY ENVIRONMENTAL CHECKLIST

Project:	Caustic Transfer Sump Pump	**Job No:**	PY368H
Inspector:	XXX	**Date:**	XXX
Weather:	XXX	**Area Inspected:**	General Site
Current Activities:	Civil Construction		

	Checklist	Action Required		
	Flora / Fauna / Pest Plants & Animals			
1	Are clearing limits clearly defined / communicated to relevant persons?	☐ **Yes**	☐ **No**	☐ **N/A**
2	Are limits of clearing being minimised and staged in accordance with the EMP?	☐ **Yes**	☐ **No**	☐ **N/A**
3	Is pre-clearing removal of habitat structures (logs, hollows) being completed in accordance with the EMP?	☐ **Yes**	☐ **No**	☐ **N/A**
4	Has a Fauna Spotter inspected / attended all clearing of native vegetation?	☐ **Yes**	☐ **No**	☐ **N/A**
5	Has fauna injury and relocation log been completed?	☐ **Yes**	☐ **No**	☐ **N/A**
6	Are access restrictions to sensitive areas (protected plants, habitat, property) adequate and well maintained?	☐ **Yes**	☐ **No**	☐ **N/A**
7	Fauna has suitable means of escaping trenches, culverts, and other structures where they could become trapped?	☐ **Yes**	☐ **No**	☐ **N/A**
8	Vegetation to be retained and adjacent to the works is in good health?	☐ **Yes**	☐ **No**	☐ **N/A**
9	Are measures to prevent spread of weeds being implemented (access restrictions, eradication, plant wash down, separation of weed infested soil/material)?	☐ **Yes**	☐ **No**	☐ **N/A**
10	Increase in extent/cover (new outbreaks) of weed infestations identified and reported?	☐ **Yes**	☐ **No**	☐ **N/A**
11	New or increased populations of pest animals identified and reported?	☐ **Yes**	☐ **No**	☐ **N/A**
	Plant Hygiene			
12	Plant and equipment that have been off-road or operated in a restricted area have been certified free of weed material and prior to mobilisation/relocation, as applicable?	☐ **Yes**	☐ **No**	☐ **N/A**
13	Are wash down facilities designed and maintained to contain contaminants (weeds, wastewater)?	☐ **Yes**	☐ **No**	☐ **N/A**
14	Random inspection of light vehicles and plant for weed material / compliance with wash-down procedure?	☐ **Yes**	☐ **No**	☐ **N/A**
	Soil & Water			
15	Are clean water diversions installed around major disturbances, where possible?	☐ **Yes**	☐ **No**	☐ **N/A**
16	Are cut-off drains or alternative measures installed to break-down steep slopes and larger catchments?	☐ **Yes**	☐ **No**	☐ **N/A**

	Checklist	Action Required		
17	Are drainage well defined and flow dissipation / check dams installed where necessary?	☐ **Yes**	☐ **No**	☐ **N/A**
18	Are sed. traps (basins, sed. fence, bunds) installed in effective locations (down slope boundaries, discharge pts)?	☐ **Yes**	☐ **No**	☐ **N/A**
19	Are sediment controls installed properly, of adequate scale, and structurally sound with minimum 2/3 capacity?	☐ **Yes**	☐ **No**	☐ **N/A**
20	Are access points stable and haul roads well maintained / roads free of mud?	☐ **Yes**	☐ **No**	☐ **N/A**
21	Are stockpiles within height limits, well profiled, with controls?	☐ **Yes**	☐ **No**	☐ **N/A**
22	Is revegetation (temporary or permanent) and/or maintenance being actioned in a timely manner?	☐ **Yes**	☐ **No**	☐ **N/A**
23	Visual signs of degradation of watercourses (e.g. sedimentation)?	☐ **Yes**	☐ **No**	☐ **N/A**
24	Has WQ monitoring been completed in accordance with EMP (prior to basin discharge and daily during discharge)?	☐ **Yes**	☐ **No**	☐ **N/A**
25	Are activities in watercourses (bed or banks) in accordance with permit conditions / exemption guidelines?	☐ **Yes**	☐ **No**	☐ **N/A**
26	Are minor qualities of fuels, oils, chemicals, and other hazardous materials secure from spillage?	☐ **Yes**	☐ **No**	☐ **N/A**
27	Are bulk fuels, oils, chemicals, and other hazardous materials appropriately bunded (impervious, 110% capacity)?	☐ **Yes**	☐ **No**	☐ **N/A**
28	Is refuelling and other oil/chemical transfer in accordance with EMP (50m from drainage where practicable, containment devices, spill prevention fitted equipment, etc.)?	☐ **Yes**	☐ **No**	☐ **N/A**
29	Is spill (and fire) response equipment of adequate type (hydrocarbon, chemical, floating), number and capacity for the works and readily visible / accessible? Are SDS readily identified / accessible?	☐ **Yes**	☐ **No**	☐ **N/A**
30	Have all spills been remediated appropriately?	☐ **Yes**	☐ **No**	☐ **N/A**
31	Hot works and smoking are restricted to designated areas?	☐ **Yes**	☐ **No**	☐ **N/A**
32	Firefighting equipment (extinguishers, water, pumps) of adequate capacity is located in all vehicles / storage / hot work areas?	☐ **Yes**	☐ **No**	☐ **N/A**
33	Fire prevention measures are in place to protect other potential ignition sources / fuels?	☐ **Yes**	☐ **No**	☐ **N/A**
34	Bushfire response and evacuation procedures are clearly communicated to all personnel?	☐ **Yes**	☐ **No**	☐ **N/A**
	Dust / Noise / Vibration / Nuisance			
35	Dust control measures (e.g. wetting, speed limits) are maintaining dust within acceptable levels?	☐ **Yes**	☐ **No**	☐ **N/A**
36	Noise control measures (e.g. conditioning, restricted hours) are being implemented in sensitive (habitat) areas?	☐ **Yes**	☐ **No**	☐ **N/A**
37	Plant & equipment emissions (i.e. noise, exhaust smoke) present doubt of compliance with relevant criteria?	☐ **Yes**	☐ **No**	☐ **N/A**
38	Vibration (indicators) at sensitive receptors present doubt of compliance with vibration criteria?	☐ **Yes**	☐ **No**	☐ **N/A**
	Waste / Recycling			

	Checklist	Action Required		
39	Waste / recyclables are segregated to maximise recovery of recyclable materials and minimise waste?	☐ **Yes**	☐ **No**	☐ **N/A**
40	Type and size of receptacles sufficient to properly segregated waste / recyclable materials?	☐ **Yes**	☐ **No**	☐ **N/A**
41	Receptacles / storage areas are secure from wildlife, spills & weatherproof as required for various materials?	☐ **Yes**	☐ **No**	☐ **N/A**
42	Licensed operators are / disposing waste / recyclables? Waste tracking records complete?	☐ **Yes**	☐ **No**	☐ **N/A**
	Energy & Water Use			
43	Site is free of water leaks and uncontrolled running water, wastage?	☐ **Yes**	☐ **No**	☐ **N/A**
44	Hoses, taps etc. are fitted with water efficient devices (stop valves, flow restrictors?	☐ **Yes**	☐ **No**	☐ **N/A**
45	Water usage (taking) records are being maintained?	☐ **Yes**	☐ **No**	☐ **N/A**
46	Plant and equipment (including administrative) are being shut down when idle, where practicable?	☐ **Yes**	☐ **No**	☐ **N/A**
	Incidents & Corrective Action			
47	Have all incidents / complaints been reported appropriately (e.g. spills, sedimentation, harm to wildlife)?	☐ **Yes**	☐ **No**	☐ **N/A**
48	Are preventive and corrective actions being actioned in a timely manner?	☐ **Yes**	☐ **No**	☐ **N/A**

No	Actions / Comments / Issues
1.	
2.	
3	
4.	
5.	

DOCUMENT CONTROL

1. Key Information

Title:	AS-PL-009 Environment Management Plan
Prepared By:	IMS Specialist (Paul Zomer)
Approved By:	Construction Manager (Daryl Henderson)
Date Effective From:	16th July 2025
Version Number:	V1.0
Review Frequency:	Every 5 years or in conjunction with policy/procedure updates
Next Review Date:	16th July 2029
Contact(s):	IMS Specialist (Paul Zomer) Construction Manager (Daryl Henderson)

2. Revision History

Version:	Date:	Summary or Changes:	Initials:	Changes Marked:
V1.0	16/07/2025	Document Created.	P.Z.	No

3. Approvals

Name/Title:	Date:	Version:
Operations Manager (Westley Hallam)	16/07/2025	V1.0

4. Distribution

This document has been distributed to:

Name/Title/Team:	Distribution Method:	Date of Issue:	Version:
Project Team	Management Meetings, Project Team Meetings, Site Inductions.	04/07/2024	V1.0

5. Linked Documentation

(documents that have been linked or referenced to in the text of this document)

Document Title:	Document File Path:
AS-PO-003 Environmental Policy Statement	C:\Droplink\5. Aestec Server IMS\2. Document Control\1. Policy Statements
AS-PR-004 Control of Non-Conforming Products Procedure	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Procedures
AS-PR-005 Corrective Action & Improvement Procedure	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Procedures
AS-PR-006 Risk, Aspect & Opportunity Management Procedure	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Procedures
AS-PR-008 Incident Investigation Management & Reporting Procedure	C:\Droplink\5. Aestec Server IMS\2. Document Control\2. Procedures
AS-PL-006 Waste Management Plan	C:\Droplink\5. Aestec Server IMS\2. Document Control\3. Plans
AS-PL-008 Health & Safety Management Plan	C:\Droplink\5. Aestec Server IMS\2. Document Control\3. Plans
AS-SF-052 HSE Work Area Inspection	C:\Droplink\5. Aestec Server IMS\2. Document Control\5. Forms\Form - SF